



Department  
for Education

# **16-18 Accountability Measures: Technical Guide**

**For measures in 2017**

**July 2017**

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## Introduction

1.1. As announced in 2014, we are reforming the school and college accountability systems to set higher expectations, and to make the system fairer, more ambitious, and more transparent.

1.2. We need high quality 16-18 education and training to ensure young people are equipped to go on to higher education or sustainable employment. To secure this we need an accountability system that encourages high quality provision for all students, supports students in making informed choices, and identifies poor performance quickly. The government published its [plans for a reformed 16-19 accountability system on GOV.UK](#).

1.3. To achieve these aims a set of five headline measures was published for the first time in 2016 16-18 performance tables. The headline measures are **progress, attainment, progress in English and maths** (for students without a GCSE pass at A\*-C in these subjects or 9-4 for new reformed GCSEs), **retention, and destinations**.

1.4. These measures provide a rounded picture of provider performance used in a range of ways: informing student choice; informing a provider's own self-assessment and benchmarking; informing Ofsted's inspection regime; and informing government's performance management of the 16-18 sector.

1.5. From 2017 these headline measures will be extended to include level 2 vocational qualifications and disadvantaged measures will be published for all headline measures. New additional attainment and retention measures will also be published.

1.6. On 19<sup>th</sup> July, DfE published the 2017 Statement of Intent. This set out the information that will be published in the 2017 school and college performance tables. [School and college performance tables 2017: statement of intent - Publications - GOV.UK](#). The Statement explains that the 16-18 performance tables will be published in January and March as the data sources required for some<sup>1</sup> of the headline measures do not become available until after January 2018.

1.7. The technical guide does not change any previously announced policy. It provides additional information on how the performance measures will be calculated. It includes more details of the measures for 2017

## Expiry or review date

1.8. This guide will be reviewed in autumn 2017.

## Who is this advice for?

1.9. This advice is for:

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<sup>1</sup> The retention measures and the completion and attainment measures will be published in March 2017

- a) School and college leaders, school and college staff and governing bodies in all maintained schools, academies and free schools with a sixth form, sixth form colleges and general further education colleges.
- b) Ofsted inspectors, education advisers and brokers, regional school commissioners, FE advisers and the FE commissioner.
- c) Local authorities
- d) Other users of 16-18 performance tables



## Allocation of students to providers

2.1. Prior to the 2016 performance tables all results were assigned to one provider (in the reporting year). Since 2016, results are allocated on an annual basis to the provider where the student has enrolled to take their main programme of study, recorded in the school Census or Individual Learner Record (ILR). Note all results taken in that year will be allocated to the main provider, irrespective of where they were taken. Results will continue to be published at the end of the post-16 study phase; usually when the student is academic age 17 (year 13).

2.2. If a school or college defers the student's results this might mean that some results are published three years after the end of key stage 4. There are three possible sources of provider information to consider, each year:

- **schools that return the spring school census** – the spring school census returns student level information and is used to identify 16-18 students on-roll in state-funded schools as before;
- **providers that return the ILR** – the ILR returns student level information and is used to identify 16-18 students 'on-roll' in colleges (and other provider types returning the ILR); determined by where the student studied their main course of study<sup>2</sup>. Outcomes related to additional courses recorded on the ILR, which may include those delivered by a different provider, are also reported against the 'core' provider since they are responsible for that student's overall study programme
- **awarding organisation data<sup>3</sup> (for providers that do not return the spring school census or ILR)** – for providers which do not return student level information to the department i.e. independent schools, we have continued to use awarding organisation data to allocate results to providers but on an annual basis.

2.3. On completion of 16-18 study, outcomes are reported against one, two or three providers, reflecting the study and achievements with the provider in that year. [Annex A](#) provides more information on how the allocation methodology works in practice using these data sources.

## Students included at the end of 16-18 study

2.4 From the 2016 performance tables, students are included if;

a) they have entered for at least 2 qualifications, each of which is at least the size of an A level or they have entered for at least 1 qualification the size of at least 2 A levels, in the reporting year;

OR

b) they have been allocated to the same provider for the last two years;

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<sup>2</sup> Core aims will only be included if the student completed the qualifying period, this is generally six weeks for long qualifications and two weeks for short qualifications.

<sup>3</sup> Awarding organisations (AOs) deliver regulated qualifications and award examination results to students in post-16 study. Each year, the department collects data from AOs, via an external contractor, on the students who have entered exams and their results.

OR

c) they are 18 at the start of the reporting year and have not been reported in the performance tables at their current allocated provider.

Providers will still be able to defer students who meet criteria a) or b) but who are continuing their 16-18 study, as long as the student has not reached age 18 before the start of the reporting year.

2.5. This allows us to identify all students at the end of their 16-18 study, not just those following a level 3 programme of study.

2.6. Please note a student eligible for reporting in 16-18 performance tables will also need to meet criteria for each performance measure to be included in that measure. For example, to be included in the average point score per A level entry expressed as a grade, the student must have been entered for at least an AS qualification.

## Performance Measures

3.1. Effective education systems around the world have high levels of autonomy with clear and robust accountability. OECD evidence shows that strong accountability is an important part of improving students' achievement. Our new headline performance measures will shine a light on the progress that students make while at a school or college. This is a fairer reflection of how the school or college is performing than looking only at the grades that students achieve. It encourages schools and colleges to focus on achieving the best outcomes for all students, irrespective of their starting points.

### Extending the measures to level 2 students

3.2. The English and maths progress measure published in the 2016 tables included approximately an additional **142,600** extra students and **361** extra schools and colleges in 2016 performance tables because they are in scope for the English and maths measure.

3.3. In 2017, the performance tables will expand further by including students aged between 16 and 18 studying vocational qualifications at level 2. Performance tables in 2016/17 and 2017/18 will include all students taking any 'vocational' level 2 qualification that is at least the size of 2 GCSEs. However, in 2018/19 we will only include those students studying technical certificates that are on the technical certificates list for that year <https://www.gov.uk/government/publications/2019-performance-tables-technical-and-vocational-qualifications>. Vocational lists for other academic years can be found here <https://www.gov.uk/government/collections/performance-tables-technical-and-vocational-qualifications>.

### Headline measures in 2017

3.4. The five headline measures are:

- **Progress:** The progress of students is the main focus of the new accountability system. This measure is a value added progress measure for academic and Applied General qualifications, and a combined completion and attainment measure for Tech Level and level 2 vocational qualifications.
- **Attainment:** The attainment measure shows the average point score per entry, expressed as a grade and average points. Separate grades are shown for level 3 academic (including a separate grade for A level), Applied General, Tech Level and level 2 vocational qualifications, including a separate grade for Tech Certificate qualifications.
- **English and maths progress** (for those students who have not achieved a standard pass at GCSE at the end of key stage 4 – from 2017 a grade 4 or above): This measure shows the average change in grade separately for English and Maths, for those students who did not achieve a good pass at GCSE. The methodology for the measure is closely aligned with the condition of funding rules, which means that students that do not achieve a standard pass are required to continue to study English and/or maths at post-16.
- **Retention:** As the participation age has increased to 18 it is increasingly important that all young people are given suitable education and training opportunities that they see through to completion. The retention measure therefore shows the

proportion of students who are retained to the end of their main programme of study.

- **Destinations:** Including destination information in performance tables broadens the information available to the public and gives schools and colleges the opportunity to demonstrate other aspects of their performance.

## Disadvantage measures

3.5. This measure applies students' disadvantage status to each headline measure to illustrate differences between how well disadvantaged students in a school or college do compared to non-disadvantaged students nationally.

3.6. For the purposes of this measure the disadvantage classification will follow that used at key stage 4. Disadvantaged students are all students who were in receipt of pupil premium when they were in their last year of key stage 4.

3.7. The attainment, progress, retention and English and maths measures will not include students who were not reported at the end of key stage 4 – for example, because they came from overseas. Students who were known to be at independent schools in their last year of key stage 4 will be treated as non-disadvantaged. The destination measures group all students not known to be disadvantaged at the end of key stage 4 as “all other students”.

3.8. These measures will not be calculated for independent schools.

## Additional measures

3.9. In 2016, three additional attainment measures were published. These were:

- **Best 3 A levels:** For students studying A levels and no other applied or technical qualifications we expect that their programme size should be at least 3 A levels. This measure is calculated for A level students only and shows the average points per entry of a student's best 3 A levels. For students who have only entered one or two A levels their total points are still divided by three.
- **AAB in at least two facilitating subjects:** The government's current policy is to promote and incentivise participation in the facilitating subjects<sup>4</sup> at A level. This measure applies to A level students only. A student must have achieved three A levels, of which at least two are in facilitating subjects, at grades AAB. The percentage of students achieving this measure is shown for each provider.
- **Tech Bacc:** The Technical Baccalaureate (Tech Bacc) measure allows young people aspiring to a technical career a high-quality alternative to the A level route. This measure is a count of all students in a provider who have achieved the Tech

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<sup>4</sup> The facilitating subjects are biology, chemistry, English literature, geography, history, physics, modern and classical languages, maths and further maths. Classical/Modern Languages which will count towards the AAB 2017 16-18 Performance Tables indicator are: Arabic, Bengali, Chinese, Dutch, French, German, Greek (Classical), Greek (Modern), Gujarati, Irish (second language), Italian, Japanese, Latin, Modern Hebrew, Panjabi, Persian, Polish, Portuguese, Russian, Spanish, Turkish, Urdu, Welsh (second language)

Bacc. More details about the Tech Bacc, including details of the qualifications which count towards it, can be found here: [technical baccalaureate measure for 16 to 19 year olds.](#)

3.10. The remaining additional measures that will be included from 2017 tables are:

- **Level 3 maths:** This measure supports our ambition for the overwhelming majority of young people in England to study maths to age 18 by 2020. This measure will show percentage of students who achieved a standard pass or higher in GCSE maths (or equivalent) by the end of key stage 4 and go on to achieve an approved level 3 maths qualification.
- **Technical certificate measure:** Technical certificates were developed to encourage take-up of level 2 vocational qualifications that support student progression into a recognised occupation. To give time for schools and colleges to transition towards these qualifications a broader range of level 2 vocational qualifications will also be reported in 2017 and 2018 tables (see section 3.3). This measure, also reported in 2017 and 2018 tables, will show the proportion of students whose highest attainment is a vocational level 2 qualification and who achieve an approved technical certificate.
- **Returned and retained for a second year:** This supporting retention measure will show the percentage of students who return and complete a second year.
- **Retained and assessed:** This supporting retention measure will show the percentage of students who complete their main programme of study and are assessed at the end of their course.

# Qualifications and performance points

## Qualifications included

4.1. A list of qualifications recognised in the 2017 performance tables data are set out below. They are listed according to the four level 3 performance cohorts: A level, academic, applied general and tech level; and the two level 2 performance cohorts: vocational qualifications at level 2, and technical certificates.

### A level

4.2. To be included in the A level performance cohort for a provider, the student must have entered for at least one of the following qualifications in the academic years they have been allocated to that provider:

Qualification
GCE A level
Applied GCE A level single award
Applied GCE A level double award
GCE AS level
Applied GCE AS level single award
Applied GCE AS level double award
Applied GCE A level / AS level combined

### Academic

4.3. The A level category is a sub-set of the academic category. Therefore, the qualifications listed above will also be reported as academic qualifications. Please note that the AQA Baccalaureate will not count in the performance tables from 2016, therefore it has been excluded from this data. This is because, from 2016, enrichment activities do not receive performance points as these are not examined. Therefore, the diploma itself will no longer count, although the qualifications within it will continue to earn points in their own right.

4.4. To be included in the academic performance cohort for a provider, the student must have entered for one of the following qualifications, which must be equivalent in size to at least 0.5 A levels with the exception of the extended project, which although smaller is still included.

Qualification
GCE A level
Applied GCE A level single award
Applied GCE A level double award
GCE AS level
Applied GCE AS level single award
Applied GCE AS level double award
Applied GCE A level / AS level combined
International Baccalaureate Diploma (IB)
IBO Standard level component
IBO Higher level component
IBO Diploma Theory of Knowledge, Extended Essay and Reflective Project *
Pre-U Principal Subject
Pre-U Short Course Subject
Pre U Diploma
Extended Project (Diploma)
Advanced Extension Award
Core Maths Qualifications at level 3
Free standing Maths Qualification level 3 (FSMQ) *

\* These qualifications are too small to cause inclusion in the academic performance cohort on their own; however, they are still counted if students have entered other qualifications on this list.

## Applied General and Tech Level

4.5. Since 2016, only high value level 3 vocational qualifications, which meet pre-defined characteristics, are recognised in the 16-18 performance tables. The lists of vocational qualifications that will count in the 2017 performance tables can be found here: [2017 performance tables: technical and vocational qualifications](#). Only those qualifications on the list of applied general qualifications are recognised in the applied general category, and only those qualifications on the list of tech level qualifications are recognised in the tech level category. To be included in the applied general or tech level performance cohort, the student must have entered for at least one of these qualifications in the academic years they have been allocated to that provider.

## Level 2 vocational qualifications

4.6. From 2019, only technical certificates will be recognised as level 2 vocational qualifications in the 16-18 performance tables. In order to give time for institutions to transition towards these qualifications a broader range of qualifications will also be reported in 2017 and 2018 tables. These include all level 2 vocational qualifications of size equivalent to at least two GCSEs (minimum 145 guided learning hours).

## Technical certificates

4.7. Technical certificates are a subset of the level 2 vocational category. The lists of qualifications that will count in 2017 and 2018 performance tables can be found here: [2017 performance tables: technical and vocational qualifications](#) and [2018 performance tables: technical and vocational qualifications](#). To be included in the

Technical Certificate performance cohort, the student must have entered for at least one of these qualifications in the academic years they have been allocated to that provider.

## Discounting

4.8. Discounting is primarily about ensuring that where a student has taken more than one qualification in the same subject area, the performance tables only give credit to institutions once for teaching a single course of study.

4.9. In 2016 performance tables the only discounting that occurred was when one level 3 qualification discounted another level 3 qualification(s).

4.10. 2017 tables will include vocational qualifications at level 2, reporting in two new performance cohorts: vocational qualifications at level 2 and a subset of those qualifications separately as the technical certificate cohort. This results in an extension of discounting where: (a) level 2 qualifications can discount other level 2 qualification(s) in the same subject area; (b) where a level 3 qualification discounts a level 2 qualification in the same subject area (but not vice-versa).

## New performance point scores

### Level 3 qualifications

4.11. The points for level 3 qualifications for the 2017 16-18 performance tables have not changed from those used in the 2016 tables and are shown in [Annex B](#). These have been developed to allow level 3 qualifications of different sizes and grade structures to be compared, as well as to act as a good basis for calculation and statistical modelling in the new headline measures.

### Level 2 performance points

4.12. The performance points developed for the vocational qualifications at level 2, reported for the first time in 16-18 performance tables, are shown in [Annex B](#).

4.13. The performance points at level 2 have been designed to have the following properties:

- As per level 3 performance points, larger qualifications attract more points (size is measured relative to 1 GCSE equivalent);
- Differences in reported headline attainment measures (average point score per entry, average grade) make intuitive sense; for most qualifications an improvement of one grade throughout an institution would translate into an improvement of one unit (APS per entry) or one grade (average grade).



## Progress (and a combined completion / attainment measure)

5.1. The progress of students is the main focus of the new accountability system and they are also the measures used in minimum standards. The progress measure shows separate scores for:

- level 3 academic programmes (including A levels)
- level 3 Applied General programmes
- level 3 Tech Level programmes
- level 2 vocational qualification programmes (including tech certificates)

5.2. Level 3 value added measure is used to calculate academic and Applied General progress, whereas a combined completion and attainment measure is used for Tech level and level 2 vocational qualifications. We intend to re-examine the feasibility of developing a meaningful value added progress measure for Tech Levels, once we have sufficient data for sound analysis in 2018.

### Level 3 value added measure

5.3 For academic and applied general qualifications we use a value added progress measure to show how well students have progressed when compared with students with similar prior attainment. Progress is shown separately for academic and Applied General qualifications.

5.4 The Level 3 value added (L3VA) measure shows the progress each student makes between key stage 4 and graded level 3 qualifications (excluding Tech Levels) compared with the actual progress made by students nationally who had similar levels of attainment at key stage 4. Students are compared with other students studying the same qualification nationally before being aggregated to give an overall score for a provider. This score is expressed as a proportion of a grade above or below the national average, e.g. students achieve half a grade lower than the national average for those with similar starting points.

### Students included in the measure

5.5 To be included in the L3VA measure, a student must:

- have results at the end of key stage 4.
- have completed an academic or applied general qualification (see [Section 4.2](#)). If they enter and fail they are included, but if they withdraw and don't enter they are not.

### Qualifications included in the measure

5.6 Only academic qualifications and qualifications on the approved applied general list (see section 4.1) are included in the L3VA measures. In addition, qualifications are only included if at least 16 eligible students, in at least five providers, have an exam result.

## How the measure works

5.7. For all students we work out their average attainment at key stage 4. For academic qualifications, students' prior attainment is based on their average attainment in GCSEs only<sup>5</sup>. For Applied General qualifications, students' prior attainment is based on all qualifications achieved at key stage 4. We are currently reviewing the prior attainment methodology that will be used in future years when 16-18 tables include students who have taken a mixture of legacy and reformed GCSEs at key stage 4 and will continue to update the technical guide.

5.8. Only qualifications achieved during key stage 4 are included in the prior attainment calculation and they are included if they met the rules for inclusion in the key stage 4 tables for that year. For example, for students who completed key stage 4 in 2014 only the first entry of a subject is included and only vocational qualifications that were on the approved list for inclusion in the key stage 4 tables in 2014. Re-sits or additional qualifications gained during the 16-18 study phase are not included. This ensures a consistent baseline for all students.

5.9. To calculate the progress made by students taking the same qualification nationally we first divide students into up to 20 bands based on their prior attainment. We then calculate the average attainment for each of these bands. This allows us to compare a student's result with the average result of students with equivalent prior attainment taking the same qualification. The difference between the two is the student's value added score in that qualification.

5.10. The students' value added scores are then aggregated to create separate scores for academic qualifications and Applied General qualifications for each school or college. The supporting information allows providers to see value added scores for specific qualifications and qualification types (e.g. A levels). All results are shown with confidence intervals.

5.11. Detailed level 3 value added methodology and calculations are in [Annex C](#).

## Academic and applied general minimum standards

5.12. Minimum standards are set separately for level 3 academic and applied general qualifications using the respective school or college value added scores and associated confidence intervals. Details of the 2016 minimum standards are published in [16 to 18 minimum standards guidance for 2016](#). Details of the 2017 minimum standards will be announced later in the year.

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<sup>5</sup> A small number of other academic qualifications (such as AS levels) are included as well as GCSEs.

## Completion and attainment measure

5.13. In the 2017 performance tables we will broaden the scope of the completion and attainment measure to include all level 2 vocational qualifications equivalent in size to at least two GCSEs. The completion and attainment score will be shown separately as three cohorts: Tech Level programmes, level 2 vocational programmes (including technical certificates) and technical certificates.

5.14. We cannot use a value added progress measure for Tech Levels or level 2 vocational qualifications because there is a weak relationship between students' average key stage 4 results which are mainly made up of academic subjects, and their results in these qualification types. Instead, we use a combined completion and attainment measure. Any student who fails to complete the subject studied will be treated as a fail. The measure compares the attainment of students with the national average attainment for each qualification. The scores for each qualification are aggregated to give an overall provider score expressed as a proportion of a grade above or below the national average.

5.15. We intend to re-examine the feasibility of developing a meaningful value added progress measure for Tech Level qualifications, once we have sufficient data for sound analysis in 2018.

### How the measure works

5.16. Attainment in each qualification delivered by a provider is first calculated by adding up all the point scores for the qualification and dividing them by the number of students taking that qualification. Non-completion is treated as a fail and given a score of zero. A provider's attainment in a subject is then subtracted from the national average attainment in that subject to generate a score above or below the national average. Scores for each subject are finally aggregated to produce an overall provider score relative to the national average. For example, a provider may have a score of +0.5 in Tech Levels, meaning that on average in these qualifications, students achieve half a grade higher than the national average attainment for all students.

5.17. From 2017, the completion and attainment methodology has been updated so that the aggregate score will be weighted by the relative size of each qualification. For example the score in a qualification equivalent in size to 2 A levels will count twice as much as the score in a qualification equivalent in size to 1 A level.

5.18. In 2017, the completion and attainment measure will also be calculated for level 2 vocational qualifications.

5.19. A student is included when they study at least one Tech Level course or one level 2 vocational qualification equivalent to at least two GCSEs in a state-funded institution – for years where the student attracts funding. Students who withdraw from a relevant qualification within the funding “qualifying period”<sup>6</sup> are excluded from the measure. Where a student is recorded as having withdrawn from a qualification after the qualifying period they are treated as having failed the qualification.

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<sup>6</sup> For programmes longer than 24 weeks the qualifying period is 6 weeks, for programmes that are 2 to 24 weeks the qualifying period is 2 weeks.

5.20. For all students who complete relevant qualifications we assign a point score based on the grade that they achieved<sup>7</sup>. Fails and withdrawals after the qualifying period are given zero points. The grading information is sourced from the data supplied to the Department by awarding bodies. For many vocational qualifications, this information does not include the records of students failing qualifications. By including a completion element to this measure, we are able to cover more students than otherwise would have been possible and increase incentives to help weaker students complete their qualifications.

5.21. Students who are shown on the school census or ILR as withdrawing from a Tech Level or a level 2 vocational programme because they are transferring to start an apprenticeship, traineeship or supported internship, are excluded from the completion and attainment measure. This is so that there is no disincentive for students to take up opportunities to continue their training with employers as well as with schools and colleges.

5.22. Where a student transfers onto a different subject or qualification type with the same provider, only the latest qualification is included in the measure. For example, a student who transfers from a plumbing qualification to a construction qualification at the same provider will only have their construction qualification included in the measure.

5.23. Where a student of academic age 18 is due to complete a course at academic age 19 the qualification is also excluded from the measure.

5.24. Discounting is applied to students with a mix of level 2 vocational qualifications and Tech Level or Applied General qualifications. For example, a level 2 vocational programme is discounted by a Tech Level or an Applied General qualification in the same discounting family.

5.25. When discounting between level 2 qualifications or between Tech Levels the largest qualification takes preference. A smaller size Tech Level is discounted by a larger Tech Level as is a smaller level 2 vocational qualifications by a larger level 2 vocational qualification.

5.26. In cases where a student achieves a level 2 vocational qualification, but then fails to complete a Tech Level in the same subject, discounting is not applied and both the level 2 vocational qualification and Tech Level are reported.

5.27. The subject included must have a graded outcome. This means that the subject needs to have more than two possible outcomes.

5.28. Additionally, there needs to be a minimum of 16 students with results in that subject and at least 5 institutions offering the course nationally in order for it to be included in the completion and attainment measure. This is to avoid small numbers of students distorting results.

5.29. Subject grouping methodology has changed from 2016. Qualifications of the same subject with different awarding bodies are now grouped together rather than

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<sup>7</sup> See [Annex B](#) for further details on how grades map to point scores in the performance tables. Please note there is a separate level 2 performance points score scale for the completion and attainment measure in [Annex D](#).

grouped separately as they were in the 2016 tables. See [Annex D](#) for further details on how qualifications are grouped together in the completion and attainment measure.

## **Tech Level minimum standard**

5.30. The 2016 minimum standard for Tech Levels takes the form of a number of grades (or a proportion of one grade) below the national average attainment. Details of the 2016 standard is published in [16 to 18 minimum standards guidance for 2016](#).

5.31. We intend to develop a more robust Tech Level minimum standard. Further details will be published later in the year.

5.32. There will not be a Tech Certificate minimum standard in 2017, but this will be reviewed for future years.

## Attainment

6.1. It is important to provide an indicator of students' overall attainment in different types of qualifications, which parents and students can easily understand and use to compare providers. The headline attainment measures from 2016 are the average point score (APS) per entry and APS per entry expressed as a grade.

6.2. From 2017 the headline attainment measures will report level 3 qualifications for four performance cohorts (A level, academic, applied general, and tech level), and level 2 qualifications for two performance cohorts (vocational qualifications at level 2, and technical certificates).

## Attainment measure methodology

6.3. The average point score per entry is calculated by dividing the total number of points achieved by students in a particular cohort by the total size of entries for those students.

6.4. For example, to calculate an average point score per academic entry, the total point score achieved by students in all academic qualifications is divided by those students' total size of academic entries. The average point score per applied general and tech level entry is calculated in the same way, based on students entered for the relevant qualifications and their results.

6.5. Where a student has attempted an A level and failed, but they have been awarded an AS in the same subject, the size of the A level entry is counted and not the size of the AS level entry. Therefore, these students will have an A level size of 1 and not 0.5.

6.6. Average grades are published for each school and college in the 16 to 18 performance tables alongside the average point score per entry measure. These are reported to help interpret the average point score per entry in terms of grades that are meaningful for the types of qualification reported within each performance cohort.

6.7. The average grade per academic qualification is calculated using the average point score per academic entry. Similarly, the average grade per A level, applied general, tech level, vocational qualifications at level 2, and technical certificate qualifications are calculated from the respective average point scores per entry.

6.8. The average point score per entry is assigned an average grade based on the average point score band rules set out in Table 6.1.a. and 6.1.b. and 6.1.c below.

- Average grade per A level and academic entry is reported in terms of A level grades. Table 6.1.a. shows the relevant point score bands for A levels and academic qualifications.
- Average grade per level 3 vocational entry is reported in terms of BTEC Subsidiary Diploma (Level 3) grades. Table 6.1.b. shows the relevant point score bands for applied general and tech level qualifications.
- Average grade per level 2 vocational entry is based on a level 2 qualification with a Distinction\*/Distinction/Merit/Pass grade structure. Some reported level 2

vocational qualifications have passing grades at level 1, and the scale is extended to reflect this. All passing grades in reported qualifications will count towards an institution's APS per entry score and the related average grade. Table 6.1.c. shows the relevant point score bands for vocational qualifications at level 2 and technical certificate qualifications.

6.9. A worked example of calculating an average grade per academic qualification based on a cohort of 5 students is shown in Table 6.1.d.

**Table 6.1.a – Average grade per A level or academic qualification**

<b>A level grade</b>	<b>A level point score</b>	<b>APS band</b>	<b>Fine grade<sup>8</sup></b>
<b>(for comparison only)</b>			
A*	60	58.34 – 60.00	A*
		55.00 – 58.33	A*-
A	50	51.67 – 54.99	A+
		48.34 – 51.66	A
		45.00 – 48.33	A-
B	40	41.67 – 44.99	B+
		38.34 – 41.66	B
		35.00 – 38.33	B-
C	30	31.67 – 34.99	C+
		28.34 – 31.66	C
		25.00 – 28.33	C-
D	20	21.67 – 24.99	D+
		18.34 – 21.66	D
		15.00 – 18.33	D-
E	10	11.67 – 14.99	E+
		8.34 – 11.66	E
		5.00 – 8.33	E-
U	0	Below 5.00	U

<sup>8</sup> Fine grades such as B-, B and B+ are assigned by evenly distributing the points around the point score i.e. 40 points for a grade B.

**Table 6.1.b – Average grade per applied general or tech level qualification**

BTEC subsidiary diploma grade	BTEC subsidiary diploma points	APS band	Fine grade <sup>9</sup>
For comparison only			
Distinction*	50 <sup>10</sup>	46.67 – 50.00	Dist*
		41.67 – 46.66	Dist*-
Distinction	35	36.67 – 41.66	Dist+
		33.34 – 36.66	Dist
		30.00 – 33.33	Dist-
Merit	25	26.67 – 29.99	Merit+
		23.34 – 26.66	Merit
		20.00 – 23.33	Merit-
Pass	15	16.67 – 19.99	Pass+
		13.34 – 16.66	Pass
		10.00 – 13.33	Pass-
U	0	Below 10.00	U

<sup>9</sup> Fine grades for the vocational grade bands are assigned by evenly distributing the points around the points/grades for the BTEC Subsidiary Diploma.

<sup>10</sup> Note: in some exceptional circumstances providers may achieve a tech level APS above 50 where students have entered for Principal Learning qualifications



**Table 6.1.c – Average grade per level 2 vocational qualification**

Grade		Points / size (L1/L2 vocational )	APS band	Fine grade <sup>11</sup>
L2	Distinction *	8	>7.83 - 8.00	L2 Dist*
			>7.50 - 7.83	L2 Dist*-
	Distinction	7	>7.17 - 7.50	L2 Dist+
			>6.83 - 7.17	L2 Dist
			>6.50 - 6.83	L2 Dist-
	Merit	6	>6.17 - 6.50	L2 Merit+
			>5.83 - 6.17	L2 Merit
			>5.50 - 5.83	L2 Merit-
	Pass	5	>5.17 - 5.50	L2 Pass+
			>4.83 - 5.17	L2 Pass
>4.50 - 4.83			L2 Pass-	
L1	Distinction	4	>4.17 - 4.50	L1 Dist+
			>3.83 - 4.17	L1 Dist
			>3.50 - 3.83	L1 Dist-
	Merit	3	>3.17 - 3.50	L1 Merit+
			>2.83 - 3.17	L1 Merit
			>2.50 - 2.83	L1 Merit-
	Pass	2	>2.17 - 2.50	L1 Pass+
			>1.83 - 2.17	L1 Pass
			1.50 - 1.83	L1 Pass-
U	0	Below 1.5	U	

**Table 6.1.d – Example of calculation for average grade per academic qualification**

Students	Total academic point score	No of academic entries
Student 1	100	3.0
Student 2	240	4.0
Student 3	140	3.0
Student 4	210	5.5
Student 5	140	4.0
<i>Sum of Total academic point scores=</i>	830	
Sum of academic entries=		19.5
<b>Average point score</b>	<b>42.56</b>	
<b>Average grade (academic)</b>	<b>B+</b>	

<sup>11</sup> Fine grades for the L2 vocational grade bands are assigned by evenly distributing the points/grades for a prototypical qualification with a D\*/D/M/P grade structure at L2. Some reported qualifications include grades that span both L2 and L1 so the fine-grade classification is extended to reflect this.

## **Discounting of level 3 qualifications**

6.10. The discounting methodology for level 3 qualifications is unchanged from 2016 performance tables.

## **Discounting of Level 2 qualifications**

6.11. Level 2 vocational qualifications can be discounted by level 3 qualifications reported in performance tables (applied general and tech levels potentially) in the same subject area.

6.12. Discounting between level 2 qualifications prefers first the largest qualification, and if all the same size, the qualification with the most performance points in the same subject area. There is no priority given to technical certificates, which can be discounted by other level 2 vocational qualifications and vice-versa.

## **Additional attainment measures**

6.13. In addition to the headline attainment measures, there are five additional attainment measures. These are described below.

### **Best 3 A levels measure**

6.14. This measure applies to the subset of A level students who entered at least one full size A level (this includes double award A levels, and applied A levels, but does not include AS levels, general studies or critical thinking). If students are entered for less than three full size A levels, they are only included in the measure if they have not entered for other academic, applied general and tech level qualifications greater than or equal to the size of an A level. Where a student has only been at a provider for one year, they need to have entered three A levels to be included.

6.15. A best 3 A levels score is then calculated for each student by adding together the points in their best 3 A levels, then summed across a school or college. This is divided by the number of eligible students, then further divided by three to give a best 3 A levels points per entry, and this is also expressed as a grade.

6.16. For students who have only entered one or two A levels, but have been at a provider for two years and haven't entered at least size 1 of other approved qualifications, the points in their one or two A levels are still divided by three.

### **Examples of the best 3 A levels measure works**

6.17. The following examples assume all the students remained at the same provider for two years.

Student	Qualification	Grade	Points	Comment
A	Single Award A level (size =1)	A*	60 pts	For this student their best 3 A levels count in the measure. [Note, students who study combined A/AS levels, where size = 1.5, each result is divided by 1.5 to scale the size/points to 1 A level].
	Single Award A level (size =1)	B	40 pts	
	Single Award A level (size =1)	B	40 pts	
	<b>Total points</b>		<b>140 pts</b>	
B	Double Award A level (size =2)	A* A*	120 pts	In this case the double award counts as two of their best three A level entries; only the best result from the two single award A levels count (if there are two double awards, the pts from the lower grade are halved)
	Single Award A level (size =1)	A	50 pts	
	Single Award A level (size =1)	B	ignored	
	<b>Total points</b>		<b>170 pts</b>	
C	Single Award A level (size =1)	B	40 pts	Although this student has only entered 2 A levels they still count in the measure, provided they have not also entered an approved tech level, applied general or other academic qualification of size =1). The AS result does not count (only A levels count in this measure).
	Single Award A level (size =1)	B	40 pts	
	Single Award AS level (size =0.5)	C	Ignored	
	<b>Total points</b>		<b>80 pts</b>	

The points for students A, B and C are combined to produce a provider score in the best 3 A levels measure as follows:

Student	Points	Total points	Total entries	Points per entry	Result expressed as a grade
A	140	390	9 (number of students x 3)	390 / 9 = 43.33	B+
B	170				
C	80				

### AAB measure (of which at least two are in facilitating subjects)

6.18. This measure applies to the subset of A level students who entered at least one full size A level, excluding applied A levels (this includes double award A levels, but also does not include AS levels, general studies or critical thinking). It is a similar subset to the best 3 A levels measure, except that applied A levels are not included when determining the cohort. If students are entered for less than three full size A levels, they are only included in the measure if they have not entered for other academic, applied general and tech level qualifications greater than or equal to the size of an A level. Where a student has only been at a provider for one year, they need to have entered three A levels to be included. A student must have achieved three A levels, of which at least two are in facilitating subjects, at grades AAB or better. The percentage of students achieving this measure is shown for each provider.

6.19. The facilitating subjects are: Biology, Chemistry, Physics, Mathematics, Further Mathematics, Geography, History, English Literature and Classical/Modern Languages<sup>12</sup>.

6.20. The qualification numbers for A level facilitating subjects, Awarding Organisations and qualification titles are listed for each facilitating subject in [Annex I](#).

### **TechBacc measure**

6.21. This measure is a count of all students in a provider who have achieved the TechBacc. More details about the TechBacc, including details of the qualifications which count towards it, can be found here: [Technical baccalaureate measure for 16 to 19 year olds](#).

6.22. A list of the level 3 mathematic qualifications which count towards the TechBacc in 2017 can be found at [Annex J](#).

6.23. Students need to achieve at least a pass grade in all of:

- a tech level
- a level 3 maths qualification from the list in the link above, such as core maths
- an extended project qualification

### **Technical certificate measure**

6.24. This measure will show the proportion of students whose highest attainment is a level 2 qualification and who achieve an approved technical certificate.

6.25. Note discounting will not apply in this measure. Consequently, a student who passes both a technical certificate and also a larger vocational qualification at level 2, will count towards an institution's performance in this measure.

### **Attainment of an approved level 3 maths qualification**

6.26. This measure supports our ambition for the overwhelming majority of young people in England to study maths to age 18 by 2020. New, high-quality 'Core Maths' qualifications provide an option to continue the study of maths for those students with at least a grade C at GCSE, but who do not wish to take A level or AS level maths. This measure is designed to reward providers for supporting students to develop the advanced mathematical skills that are valued by universities and employers.

6.27. This measure shows the percentage of students who achieved GCSE maths A\*-C (or equivalent) or grade 4 or above by the end of key stage 4, who go on to achieve an approved level 3 maths qualification.

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<sup>12</sup> Classical/Modern Languages which will count towards the AAB 2017 16-18 Performance Tables indicator are: Arabic, Bengali, Chinese, Dutch, French, German, Greek (Classical), Greek (Modern), Gujarati, Irish (second language), Italian, Japanese, Latin, Modern Hebrew, Panjabi, Persian, Polish, Portuguese, Russian, Spanish, Turkish, Urdu, Welsh (second language)

6.28. The same list of qualification types used to assess prior attainment in the English and maths progress measure (see [chapter 7](#)) are also used in the level 3 maths measure. As such the vast majority of students will either be included in the maths progress measure (those without a GCSE A\*-C or equivalent or without GCSE grades 9-4) or in this level 3 maths attainment measure (those with a GCSE A\*-C or equivalent or with a GCSE grade 9-4). No students will be included in both measures.

6.29. Approved maths qualifications at level 3 will be those that count in the TechBacc (see [Annex J](#)).

## Calculating the measure

6.30. In the most straightforward cases the calculation simply divides the number of students who pass an approved level 3 maths qualification by the number of students in scope for the measure.

6.31. However, if a student already has an approved level 3 maths qualification (from either key stage 4 or an earlier 16-18 institution) that student remains in scope for the current institution *only* if they achieve another approved level 3 maths qualification.

6.32. This special treatment for students who already have an approved Level 3 maths qualification is to avoid penalising institutions where, for example, students do not repeat an AS Maths qualification gained at KS4 in the 16-18 phase. If a student changes institutions in the 16-18 phase in between AS and A level maths, the A level attainment will count positively towards the second institution's performance in this measure.

## English and maths

7.1. English and maths provide a vital foundation to enable students to progress to employment and further study. This measure will help the public hold schools and colleges to account for the progress of students in English and maths where they did not achieve at least a grade C or grade 4 or above at GCSE by the end of key stage 4.

### How the measure works

7.2. The English and maths progress measure is made up of two distinct measures, one for maths and the other for English, and an individual student can be in scope for one, both or neither measure depending on their achievement in English and maths by the end of KS4.

7.3. Students in overall scope for each measure have their progress assessed by comparing their best grades by the end of KS4 to those achieved by the end of post-16 study<sup>13</sup>.

7.4. By aggregating student progress scores to give overall English and maths progress scores for each school and college, the effectiveness of the school or college can be measured and they can be held accountable.

### Data sources

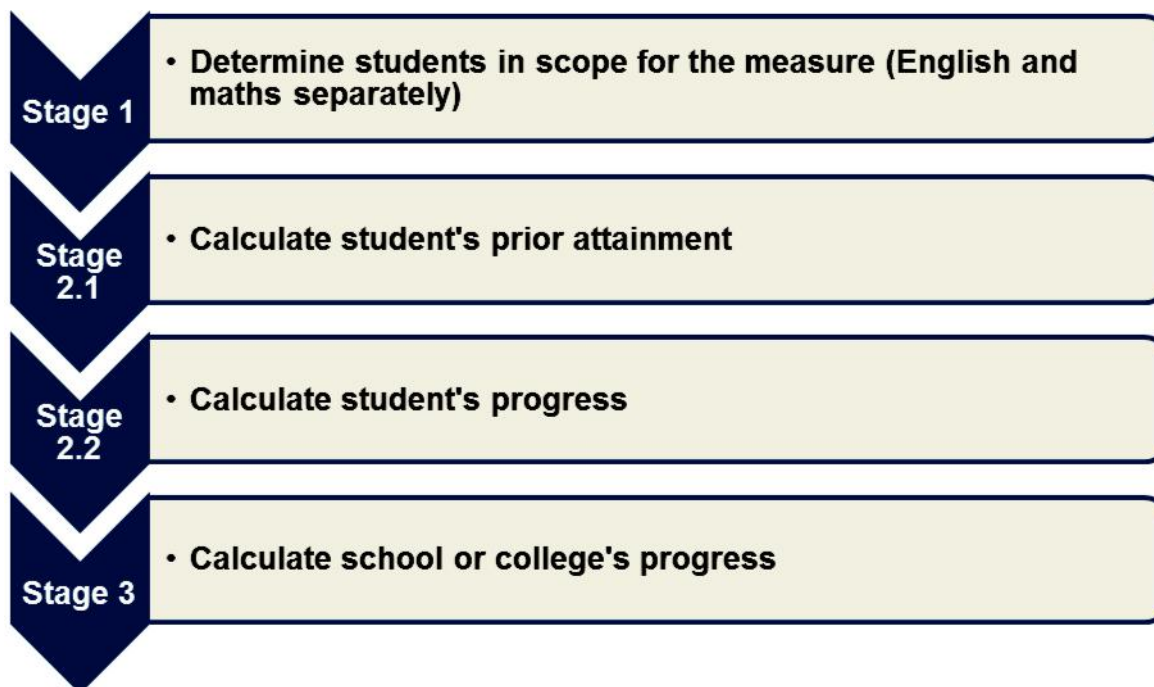
7.5. The primary source of information underpinning the English and maths progress measure is current and historical exam data sourced from Awarding Organisations. This data is used to determine students' prior attainment (and so whether in scope of the measure), and the progress students make in the 16-18 phase.

7.6. In addition, funding data collected by the Education and Funding Agency (EFA) is used to determine whether any student is exempt from the requirement to study English and/or maths post-16 irrespective of their prior attainment. The English and maths accountability measure broadly aligns with the EFA condition of funding rules which require students without prior attainment of GCSE A\*-C or grades 9-4 in English and/or maths to be studying these subjects as part of their study programme in each academic year.

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<sup>13</sup> Note, because only a student's best performance is considered, both during KS4 and in the 16-18 phase, formal discounting as implemented in attainment measures is not required here.

## Overview of the measures



## Calculating the English and maths progress measures

7.7. The following sections give more detail on what is involved when determining which students are in scope of the progress measure, and for those in scope, calculating both their level of prior attainment and progress made in the institution post-16.

## Students included in the measures, exclusions and exemptions

7.8. Students are potentially in scope for either the English or maths progress measures if they did not achieve a GCSE grade A\*-C or 9-4 or equivalent by the end of KS4 in that subject.

7.9. Students for whom no recorded prior achievement exists in exam records are excluded from the measure.

7.10. Exam results have been combined with EFA funding data to identify students that schools and colleges have confirmed as exempt from the requirement to study English and maths in the 16-18 phase, in particular:

- students with learning difficulties and/or disabilities, who are assessed as not able to study either GCSE or stepping stone qualifications;
- students with overseas qualifications that are established as equivalent to GCSE grade C or grade 4.

7.11. In addition, there are students for whom condition of funding rules do not apply. These includes students on study programmes under 150 hours, and students not on a study programme generally, for example those on an apprenticeship programme. From



2017 performance tables – where EFA funding data confirms the condition of funding does not apply – these students will also be exempted.

## Qualifications included in the measures: students in scope

7.12. EFA guidance<sup>14</sup> sets out the full list of qualification types equivalent to GCSE grade A\*-C for the purpose of prior attainment. Principally these are qualifications in maths, English language and English literature from Ofqual approved GCSEs graded A\*-C (and 9-4 for new reformed GCSEs), level 1/level 2 certificates grade A\*-C, and some level 3 qualifications such as A/AS levels, International Baccalaureate including maths components, and Core Maths.

7.13. The guidance is used to inform a list of specific qualifications that the student's exam record is checked against to determine whether the student is in scope for the English and maths progress measures. The check is made against all examination results achieved by the student up to and including key stage 4.

7.14. English literature GCSE counts for prior attainment; a student with either an English language or literature GCSE at A\*-C by the end of key stage 4 is out of scope of the English progress measure. However, English literature GCSE does not count for progress.

## Qualifications included in the measures: starting point

7.15. When assessing a student's starting point for the calculation a similar process occurs as when assessing whether a student is in scope for the measure. However, the list of qualifications used to establish their level of prior attainment is wider, in particular including Basic Skills, Key Skills and Functional Skills. This is to recognise that whilst students may end key stage 4 with no GCSE passes in English and/or maths, achievement in other qualifications provide evidence of their level of ability when starting post-16 study.

## Qualifications included in the measures: progress

7.16. During post-16 study, students for whom the condition of funding applies must be enrolled on an approved qualification. The list of qualifications approved for teaching under the condition of funding is maintained on the [Learning Aims Reference Service \(LARS\)](#).

7.17. This list of qualifications approved for teaching is used to determine which individual qualifications 'count' for progress in the measure. Any post-16 attainment in an English or maths qualification that is not approved for teaching as set out on LARS is not captured in the progress measure.

7.18. Qualifications are approved for a set period of time and are organised in LARS based on whether the qualification is approved in a given academic year. As such the student's exam record for a given academic year is compared to the list of approved qualifications for that academic year, and the student's best result (in terms of performance points) is recorded and used when calculating progress.

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<sup>14</sup> EFA guidance is published [here](#).



7.19. Further details are given in [Annex E](#) around the expectation that students with a prior attainment grade D study GCSEs rather than stepping stone and the treatment of unregulated level 1/ level 2 qualifications.

## Calculating progress

7.20. In the most straightforward cases the calculation of progress simply subtracts their performance post-16 from their prior attainment at KS4. For example:

- If an individual student moves from an E grade to a C grade they would receive a progress score of +2 as they have made two grades progress;
- If the student starts at grade E but achieves a grade F during post-16 they would receive a progress score of -1.

### Students attending multiple institutions post-16

The highest English and maths grade a student has achieved when they enter an institution is the baseline for the calculation. This may be the grade a student achieved at key stage 4 or a grade achieved with a different institution at an earlier stage of 16-18 study. This ensures the measure only counts the progress an institution makes with a student to improve their English and/or maths.

A consequence is that an individual student might be in scope for the measure at the end of key stage 4 for their first institution attended – and progress in that institution will be included in performance tables – but if the student achieves the A\*-C (or 9-4) standard in the first institution then the student is out-of-scope of the measure at their second institution.

When a student attends multiple institutions post-16, requiring both their scope and starting point to be re-assessed, the only new exams taken into account after key stage 4 are those approved for teaching post-16 under the condition of funding, i.e. the qualifications listed on LARS online that 'count' for progress.

7.21. We do not wish institutions to be disproportionately penalised where a student is unable to enter for an English or maths exam or where factors outside of an institution's control lead to a bad result. This is achieved by applying a cap to the measure so that -1 grade is the maximum negative progress score applied to an individual student. Students not entered for any exams automatically score -1. For example:

- A student who enters with a D grade but achieves an F grade when they retake has their progress capped to -1 grade (rather than -2);
- A student who enters with an E grade but does not sit the exam has their progress capped to -1 grade (rather than -3).

7.22. Applying this cap means that providers who take on students with poor motivation are treated fairly. This is important as the measure includes all students who do not have a C/4 grade or above in English and/or maths, in line with the condition of funding, regardless of whether or not they enter for an examination.

## Points awarded for stepping stone qualifications

7.23. Stepping stone qualifications such as functional skills and free standing maths are taken into account when calculating the progress made by students, but do not attract as many points as good GCSE grades. Attainment of GCSE grades C/4 or above leads to the highest progress scores, and for students who already have a D/3 grade or above, re-taking a GCSE and improving their grade is the only way to attain a positive progress score.

7.24. This is done by using a capped version of the “challenge points”<sup>15</sup> from the performance points system, as illustrated in the table below which shows the points that will be used in 2017 performance tables.

7.25 In 2017, English and maths results will include reformed GCSEs graded on a 1-9 scale for the first time. The points these qualifications attract are set out in the table below. These have been set to ensure that students are treated fairly whether they have results in either legacy or reformed GCSEs. Points used for these measures will be reviewed again ahead of the 2018 tables.

Points awarded	Grade achieved					
	Reformed GCSEs (9-1)	Legacy GCSEs (A*-G)	Functional skills	Free standing maths	ESOL	AQA use of maths
8	9	A*				
7.7	8					
7	7	A				
6.3	6					
6		B				
5.7	5					
5	4	C				
4	3	D	L2	L2 (all grades)	L2 (all grades)	A*/A/B/C
3	2	E				
2.5			L1	L1 (A-C)	L1 (D/M)	D/E
2		F				
1.7				L1 (D)		
1.5					L1 (pass)	
1	1	G				G
0.8				L1 (E)		
0.4			Entry Level	Entry Level	Entry Level	
0	Fail	Fail	Fail	Fail	Fail	Fail

Note that:

- Whilst a level 2 Functional Skill has 6 challenge points, these are capped at 4 points to be equivalent to a GCSE D/3 grade and to retain the ability to suitably reward learners achieving a GCSE C/4 grade or above.
- A level 1 Functional Skill has 2.5 challenge points. This is between a GCSE E and F grade. Other level 1 courses are capped at 2.5 points to align with the level 1 Functional Skill.

<sup>15</sup> Challenge points are the points awarded for grades awarded in qualifications regardless of their size, i.e. only taking account of the challenge of the grade achieved. More detail can be found in the [guide to performance points](#).

7.26. Applying equal capping to all the stepping stone qualifications ensures they have equal value in the measure. This means that the choice of which stepping stone qualification is correct for a student should be based solely on the student's needs. The stepping stone qualifications are typically smaller than GCSEs; we have not, however, factored size into this calculation as all the qualifications have sufficient breadth to meet the existing requirements of funding.

Students in scope for the measures, but studying level 3 qualifications

In addition, a student may meet the condition of funding through approved level 3 qualifications (Core maths at level 3, A or AS levels, the International Baccalaureate, OCR Maths for Engineering level 3 certificate and OCR Cambridge Pre-U maths). The points awarded for approved level 3 qualifications are capped at 8 pts.

7.26. The measure only looks at the highest value outcome a student has attained in the institution attended. A student achieving a level 1 functional skill and a GCSE D/3 grade will be assigned 4 points in the calculation – the value of the GCSE D/3 grade.

7.27. Detailed worked examples, including what happens when students attend multiple institutions, are shown in [Annex E](#).

## Calculating school or college progress

7.28. Once the student progress scores have been calculated, the average of all the student progress scores is then calculated within the school or college.

7.29. The figure below shows an example for a school or college with 5 student progress scores:

**Example**

Student 1 English progress	= +1.0
Student 2 English progress	= +1.0
Student 3 English progress	= +0.4
Student 4 English progress	= -1.0
Student 5 English progress	= -1.0
School or college progress score for English	= $\frac{+1.0 +1.0 +0.4 -1.0 -1.0}{5}$
	= +0.08 grades

## Retention

8.1. As the participation age has been increased to 18, it is increasingly important that all young people are given suitable education and training opportunities that they see through to completion. We want providers to ensure that students study courses that match their ability and ambition; and that they remain motivated and engaged to complete their studies. The retention measure shows the percentage of students who get to the end of the programme of study that they enrolled on at a provider.

### How the measure works

8.2. The retention measure shows the percentage of students who are retained to the end of the 'core aim' (or main learning aim) of their study programme at a provider. The retention measure will show separate values for:

- a) level 3 academic programmes (including A levels)
- b) A level programmes
- c) level 3 Applied General programmes
- d) level 3 Tech Level programmes
- e) level 2 vocational qualification programmes (including tech certificates)
- f) level 2 tech certificates programmes

8.3. In the 2016 performance tables, the retention measure only applied to level 3 qualifications. However, from the 2017 performance tables, we will extend the coverage of the retention measure to include level 2 vocational programmes (including technical certificates). Other qualifications, including level 1 qualifications, supported internships and traineeships will not be reported in the headline measures.

8.4. A student's programme is defined based on their core aim. Withdrawing from supporting aims, such as GCSEs, will not stop them being counted as retained on this measure. Similarly an A level student only needs to complete one A level to be counted as retained<sup>16</sup>.

8.5. Students are counted as retained if they are recorded as having "*completed the learning activities leading to the learning aim*" on the Learning Aim Status Field of the School Census or the Completion Status Field of the ILR.

8.6. Some programmes will be more than one-year long. For example, an International Baccalaureate is typically studied over two years. For a student to be counted as retained they must complete all learning activities for an aim.

8.7. Since the retention measure is calculated at student level it is not affected by the total number of subjects a student takes, or whether they only complete a subset of these. Enrolling a student for additional AS level subjects alongside A levels, or entering a student for AS level exams as well as A level exams in the same subject will not affect the retention calculation.

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<sup>16</sup> The A level that is completed must be in a subject other than General Studies or Critical Thinking.

8.8. In the majority of cases, the core aim will be at least the size of 1 A level or 4 GCSEs. However, where students are solely taking AS levels they can be counted as retained in year 12 provided they complete at least one AS level. We will publish separately supporting information on the proportion of level 3 students who return in year 13 (see from [paragraph 8.23](#)).

8.9. Some students may take multiple programmes that are one academic year in length. In these cases, they need to have completed in any year, for level 3 programmes, an aim equivalent to the size of 1 A Level and for level 2 programmes an aim equivalent in size to 4 GCSEs. Or if they have no aims of this size, an aim of A level size 0.5 or GCSE size 2, for level 3 and level 2 programmes respectively, again in any year. A range of examples are shown in [Annex F](#).

## Exceptions to the retention measure

8.10. Students who are not eligible for funding because they withdrew during the “qualifying period” at the start of their programme are not included in the retention measure. For programmes longer than 24 weeks the qualifying period is six weeks, for programmes that are 2 to 24 weeks the qualifying period is two weeks. All withdrawals from a programme will be treated in the same way in the measure methodology regardless of whether they are related to educational reasons or not. This aligns with the funding methodology.

8.11. The following aims are not included in the retention measure:

- where a student’s core aim is less than 0.5 in size
- where a student’s core aim has a completion status of ‘continuing’
- where the planned end date of a student’s core aim is after the current reporting year and the student is academic age 18 in the reporting year

8.12. Independent schools are not included in the retention measure as learning aims data are not available for these schools.

## Selection of the core aim

8.13. The majority of students will only have one core aim for their time in 16-18 education. However, any students who attend multiple institutions will have one core aim for each institution attended.

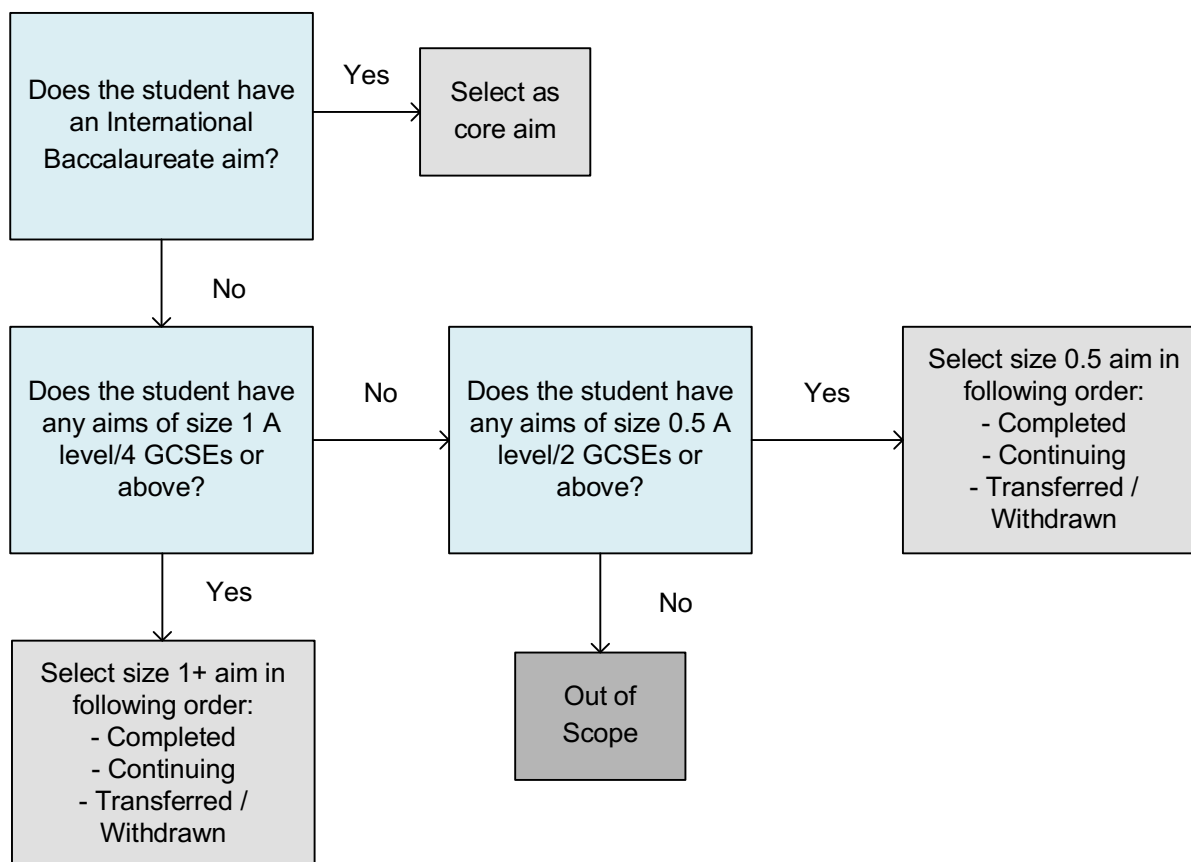
8.14. The process of selecting a student’s core aim depends on the combination of aims that a student is studying. A student can be either studying all academic aims, all vocational aims or a mixture of academic and vocational aims.

8.15. When a student has a mix of level 2 and level 3 aims, the level of their aims is largely ignored in selecting the core aim as selection will continue to be done on the status of the aim. The level of the aim only comes into consideration where a student has multiple aims of the same size with the same status.

## All academic aims or academic aims and level 2 vocational aims only

8.16. If a student is studying the International Baccalaureate, this aim is selected as their core aim due to the large size of this type of qualification. Otherwise, an aim of size

1 A level or 4 GCSEs or above is selected as their core aim, with preference being given to any aim recorded as 'completed'. If a student has no completed aims, then an aim recorded as 'continuing' is selected. If a student has no completed or continuing aims, then an aim recorded as 'withdrawn' or 'transferred' is selected as their core aim.



8.17. If a student does not have any aims of size 1 A level or 4 GCSEs or above, the above process is followed for aims of size 0.5 A levels or 2 GCSEs or above.

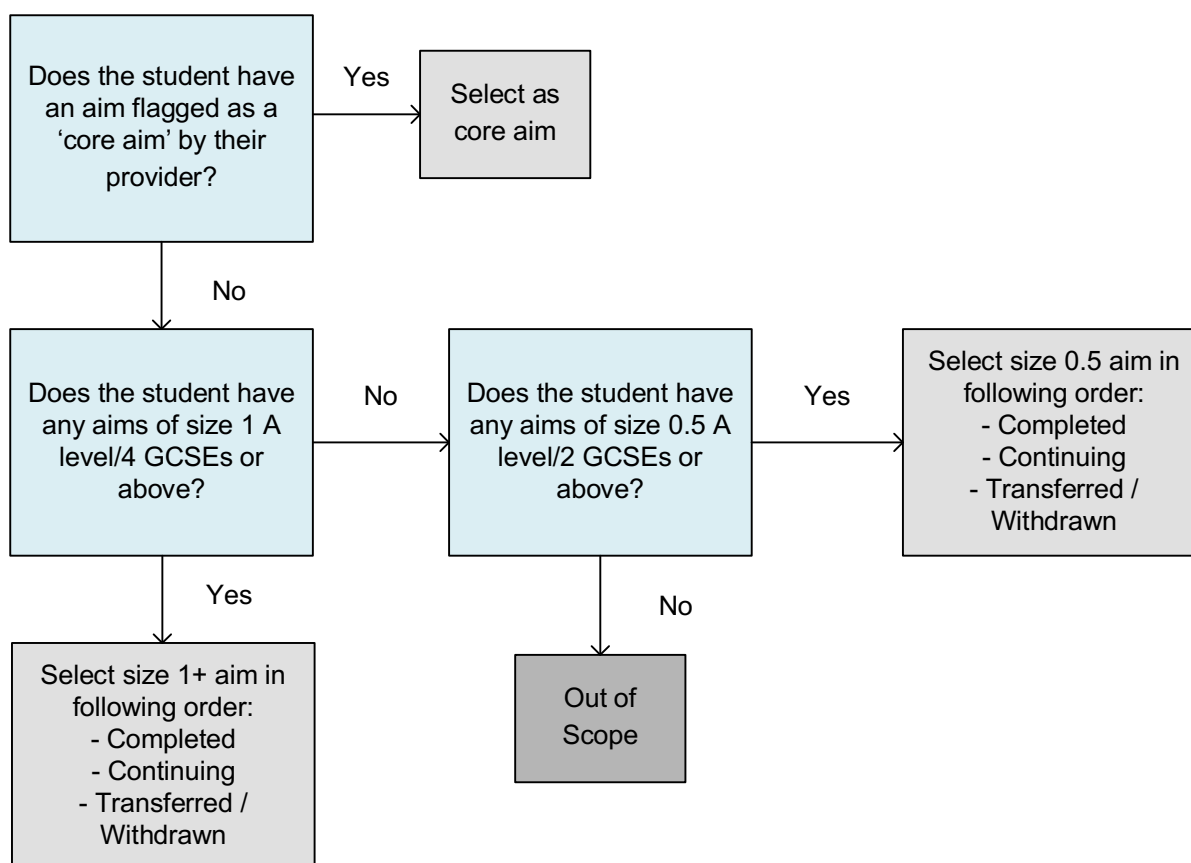
8.18. If a student has multiple aims with the same status, the following criteria are used (in order) to select a single core aim:

- A level or AS level
- aim flagged as a 'core aim' by the provider
- qualification included in the performance tables
- largest size (size of level 2 aims is divided by 4 before comparing to level 3 aims)
- level 3 over level 2

## All vocational aims

8.19. If a student has an aim which has been flagged by their provider as being their 'core aim' (for funding purposes), it is selected for the retention measure. If a student has no aims flagged as a 'core aim', then any aim equivalent in size to 1 A level (level 3 programmes) or 4 GCSEs (level 2 programmes) or above is selected as their core aim, with preference being given to any aim recorded as 'completed'. If a student has no completed aims, then any aim recorded as 'continuing' is selected. If a student has no completed or continuing aims, then any aim recorded as 'withdrawn' or 'transferred' is selected as their core aim. If a student does not have any aims of size 1 A level or 4

GCSEs or above, the process below is followed for aims of size 0.5 A levels or 2 GCSEs or above.

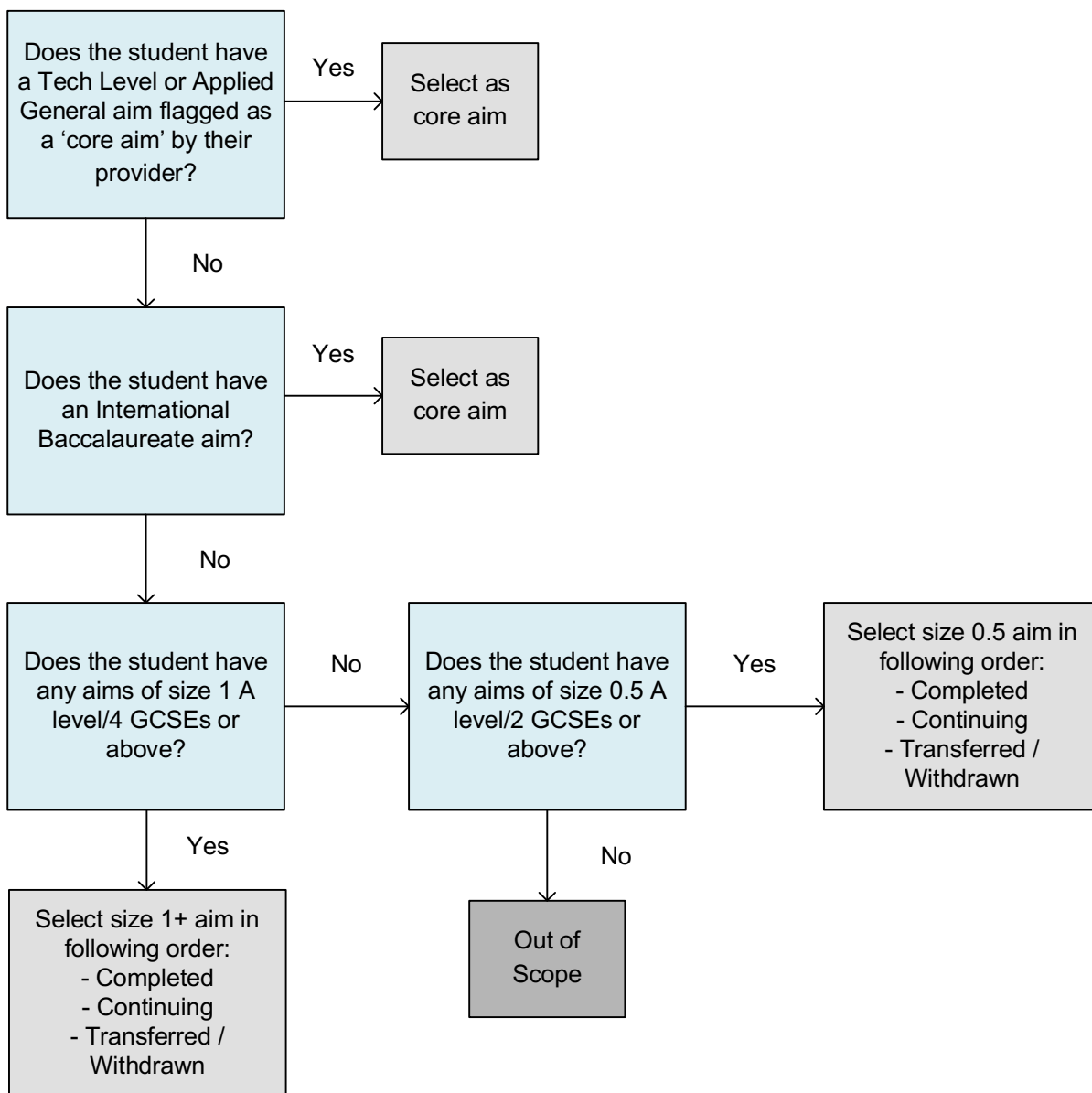


8.20. If a student has multiple aims with the same status, the following criteria are used (in order) to select a single core aim:

- qualification included in the performance tables
- aim of the same type as the majority of the student's attainment
- largest size (size of level 2 aims is divided by 4 before comparing to level 3 aims)
- level 3 over level 2

### Mixture of academic and vocational aims

8.21 If a student has a Tech Level or Applied General aim which has been flagged by their provider as being their 'core aim' it is selected for the retention measure. If not and they are studying the International Baccalaureate, then this aim is selected as their core aim. If a student does not meet these first two criteria, then any aim of size equivalent to 1 A level (level 3 programmes) or 4 GCSEs (level 2 programmes) or above is selected as their core aim, with preference being given to any aim recorded as 'completed'. If a student has no completed aims, then any aim recorded as 'continuing' is selected. If a student has no completed or continuing aims, then any aim recorded as 'withdrawn' or 'transferred' is selected as their core aim. If a student does not have any aims of size 1 A level or 4 GCSEs or above, the process below is followed for aims of size 0.5 A levels or 2 GCSEs or above.



8.22. If a student has multiple aims with the same status, the following criteria are used (in order) to select a single core aim:

- qualification included in the performance tables
- aim of the same type as the majority of the student's attainment
- A level or AS level if the majority of the student's attainment is academic
- largest size (size of level 2 aims is divided by 4 before comparing to level 3 aims)

level 3 over level 2

## Supporting retention measures

8.23. Alongside the headline retention measure there will be two supporting retention measures published in the performance tables from 2017.

### Returned and retained for a second year

8.24. This supporting measure will show the percentage of level 3 students who return to the same provider for a second year of study and are retained in their second year. It



will highlight cases where, although students are retained, they have only completed, for example, AS levels and do not return for a second year of study.

8.25. Students with a level 3 core aim are in scope for the measure, regardless of whether they were retained in year 12.

It will be shown separately as four cohorts:

- a) level 3 academic programmes (including A levels)
- b) A level programmes
- c) level 3 Applied General programmes
- d) level 3 Tech Level programmes

8.26. The following students are excluded:

- Students with a level 2 core aim (since many level 2 programmes are not expected to be two years long)
- Students who are academic age 18 in their first year in the institution (since they would be out of scope for inclusion in performance tables in their second year)
- Students who achieve a sizeable qualification (their level 3 qualifications of size 1 or above sum to 2 or more) in their first year in the institution (since they have already completed what is expected)

8.27. To be counted as returned and retained for a second year, a student must:

- be recorded as completing their selected core aim which is at least size 1 and in scope for inclusion in the performance tables
- have been attending the institution for at least two academic years
- have completed a level 3 qualification of at least size 1 in their second (or third) year at the institution (this may be the selected core aim or another aim).

8.28. A student is deemed to have been attending an institution for at least two academic years if they meet any of the following conditions:

- they have aims at that institution in three academic years
- they have aims at that institution in two academic years and have been at that institution for at least 602 days (based on the start and end dates of all their aims at that institution)
- they have aims at that institution in two academic years, they left in May, June or July and have been at that institution for at least 480 days<sup>17</sup>.

## **Retained and assessed**

8.29. This supporting measure will show the percentage of students who are retained to the end of their course and are assessed. This allows monitoring of whether students are effectively completing their study rather than merely being enrolled at an institution for a certain period of time.

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<sup>17</sup> Exact cut-off to be confirmed.

8.30. A student will be considered retained and assessed<sup>18</sup> as long as they have an exam result that matches on the level of and is at least the same size as the core aim qualification selected for the headline retention measure. For example, if a student's core aim is an A level in Biology with size of 1, we do not require it to match to the a Biology A level but just one of the same size. Similarly, we also do not require the qualification type of the result to match the aim as long as it is of the same size. For example, a student with a Tech Level aim of size 1 is considered a match to an Applied General result of size 1.

8.31. The retained and assessed percentage will include the same students as the main retention measure. It will be shown separately as six cohorts:

- a) level 3 academic programmes (including A levels)
- b) A level programmes
- c) level 3 Applied General programmes
- d) level 3 Tech Levels
- e) level 2 vocational programmes (including technical certificates)
- f) level 2 technical certificate programmes

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<sup>18</sup> Students that have been assessed but are recorded as not retained in the headline retention measure will not be included. Students need to be both retained and assessed to be included in the retained and assessed supporting measure.

## Destinations

9.1. Schools and colleges should be supporting and preparing their students for future education, training and employment. Including destination information in performance tables broadens the information available to the public and gives schools and colleges the opportunity to demonstrate other aspects of their performance.

## Improvements to destination measures

9.2. In 2016 we published two [statistical working papers](#) which set out the improvements to coverage of student destinations, following the inclusion of new information on employment and benefits, and determined that the statistics were of sufficient quality to be [included in performance tables as a headline measure from 2016](#). This reflects the importance of this indicator for demonstrating an institution's success in helping students make a successful transition to the next stage.

9.3. From the 2017 tables we will include additional data on self-employment and on attendance at higher education alternative providers, which accounts for the destination of a small proportion of 16-18 students.

9.4. Breakdowns for disadvantaged students and others will be introduced to 2017 performance tables at 16-18, including for destination measures. All students not known to be pupil premium eligible in year 11 (including independent school pupils and those from overseas) are included in 'all other pupils' for destinations. National breakdowns for other student groups continue to be published in the [statistical first release](#).

## How the measure works

9.4. Destination measures show the percentage of key stage 5 students going to or remaining in an education and/or employment destination. The most recent data will report on students in the 2014/15 academic year and identifies their education and/or employment destinations in October to March of the 2015/16 academic year.

9.5. The destination measures cohort currently covers young people aged 16, 17 or 18 who were deemed to be at the end of 16-18 study and entered for A levels or other level 3 qualifications during the academic year. This includes young people taking academic, applied general and tech level qualifications or their approved precursors in previous academic years.

9.6. To be included in the headline measure, young people have to be recorded in sustained participation in the 6 months from October to March after finishing their level 3 qualifications. This means participation in all of the first two terms of the academic year at one or more education destinations or for 5 of the 6 months in employment. Young people with a combination of education and employment, meeting the sustained participation criteria, will also be included in the measure.

9.7. Data used to compile the measure come from the [National Pupil Database \(NPD\)](#) and [Longitudinal Education Outcomes \(LEO\)](#) datasets with individual student level data matched to a range of administrative sources on education participation, employment records and claims of out of work benefits.

9.8. A hierarchical series of rules is used to determine whether students meet the criteria for sustained participation and the specific destinations they are reported under if more than one definition is met. Full information on the methodology and data source used is available from our [technical note](#).

## Supporting information

9.9. We publish a range of supporting information on this measure. This includes further breakdowns of the data in school and college performance tables showing more detail on destinations: for example, further education colleges and higher education institutions, or employment, as well as information on those not sustaining participation in education or employment, and those with no activity captured in our data.

9.10. Further information is published in the [key stage 4 & key stage 5 destinations statistical first release](#), showing national trends and characteristics data, such as special educational needs, ethnicity, disadvantage and gender. A detailed technical note is available from this page.

## Future developments

9.11. Destination measures include students as they appeared in performance tables in the year they completed key stage 5 study. As destinations reported this year will be based on the 2014/15 cohort certain changes affecting how other accountability measures are calculated from 2016 have not yet taken effect. Definitions used for destinations cohorts therefore lag two years behind those used in other performance tables measures.

9.12. In 2015/16 a new method for allocating students was introduced, which affects those completing their studies at multiple institutions. The first destinations based on new allocation rules will follow the 2015/16 cohort into the 2016/17 academic year, with the first destinations data being available in 2018.

9.13. Currently destinations are only determined for students taking A level or other level 3 qualifications. From 2017 performance tables report additional qualifications taken by 16-18 students at schools and colleges, including vocational qualifications at level 2. We intend to track activity of these pupils into the 2017/18 academic year with the first destinations data being available in 2019.

9.14. We are continuing to work with other government departments and with analysts developing the [Longitudinal Education Outcomes](#) dataset to improve the scope of activity that can be captured. Strands under development include increasing the range of benefits included and linking to information on Scottish and Welsh schools and colleges. We are hopeful that this will increase our coverage beyond 97% in future years and more fairly reflect the outcomes of certain institutions.

## Wider qualification reform

### English and maths

10.1. We are putting English and maths right at the heart of our education system. [Reformed GCSEs in English and maths](#) were made available for first teaching in schools in September 2015. These new GCSEs will both be more stretching at the top, and more practical than existing GCSEs. These new GCSEs will then be introduced into post-16 education in phases between 2015 and 2020. 16 to 19 study programmes - building on the Wolf Review's recommendations - ensure that students who don't get at least a C/4 in English and maths GCSE by age 16 must keep on working towards them.

10.2. From September 2014, these requirements for English and maths became [a condition of 16 to 19 funding](#) and with effect from August 2015, the funding condition was amended so full-time 16 to 19 students with prior attainment of grade D/3 in English and/or maths will take GCSE, rather than any other qualification in these subjects. These changes build on wider reforms under this government to put academic and vocational education on an equal footing. They will create a culture in which the majority of young people routinely leave further education with good GCSEs in English and maths.

### A level reforms

10.3. We are reforming A levels to match the best education systems in the world and to keep pace with universities' and employers' demands. Evidence from higher education shows that new undergraduates lack some of the skills essential for undergraduate learning and that modular A levels have contributed to this. A levels are becoming linear (exams at the end of two years), allowing more time for teaching and learning.

10.4. As the first new linear A levels were introduced from 2015, the AS is entirely decoupled from the A level, ending the routine, automatic external assessment of students at the end of year 12 that places unnecessary burdens on students and teachers. The new A levels have been designed to allow awarding organisations to develop stand-alone AS qualifications taught over one or two years that can be co-taught with the A level. It will continue to be possible for students to take an AS in some subjects before deciding which to continue onto A level. Schools and colleges should support their students to decide what qualification to take.

10.5. Ofqual have decided that existing or legacy AS and A levels (this includes applied A levels) offered in subjects that are not being reformed for 2017 will be withdrawn from September 2017. This means that the majority of unreformed qualifications will be assessed for the last time in summer 2018<sup>19</sup>. The last cohort of students taking these qualifications began their studies in September 2016.

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<sup>19</sup> Re-sits will only be available to students who have taken the qualification previously, or had a good reason not to have taken it when planned (such as illness). Further information on final examinations and resits in legacy qualifications can be found [here.https://www.gov.uk/guidance/timings-for-the-withdrawal-of-legacy-gcses-as-and-a-levels](https://www.gov.uk/guidance/timings-for-the-withdrawal-of-legacy-gcses-as-and-a-levels)

10.6. AS and A levels in applied art and design; and AS and A levels in applied business will be entered for last time in 2017 and can only be offered by schools or colleges previously delivering them. There will be no resit opportunity in 2018.

## Reform of vocational qualifications

10.7. We have taken action to reform vocational qualifications to ensure that young people know which qualifications are valued by employers and promote progression. By only recognising high-value vocational qualifications in performance tables, these reforms are encouraging schools and colleges to offer vocational qualifications that genuinely support progression to skilled employment and/or higher education. To be included in performance tables, qualifications must demonstrate tough new characteristics, set out in [Technical Guidance for Awarding Organisations](#), however for 2017 and 2018 we will report all level 2 vocational qualifications. An annual process identifies the qualifications approved for inclusion in performance tables.

10.8. There are three vocational options for 16-18 year olds:

- a) Applied General qualifications are rigorous advanced (level 3) qualifications that equip students with transferable knowledge and skills. Taught from September 2014, they are for post-16 students wanting to continue their education through applied learning. They fulfil entry requirements for a range of higher education courses, either by meeting entry requirements in their own right or being accepted alongside and adding value to other qualifications at the same level.
- b) Tech Levels are rigorous advanced (level 3) technical qualifications, on a par with A levels and recognised by employers. Taught from September 2014, they equip students with specialist knowledge and skills, enabling entry to an Apprenticeship, other skilled employment or a technical degree. Backed by employers, they will equip young people with the specialist knowledge they need for a job in occupations ranging from engineering, to computing, hospitality to accountancy. In some cases, they provide a 'licence to practise' or exemption from professional exams. Tech Levels are one of the components of the [TechBacc measure](#), which recognises the highest level of technical training. For courses taught from September 2014 it will measure the achievement of students taking advanced (level 3) programmes which include a Tech Level, Level 3 maths and an Extended Project Qualification.
- c) Tech Certificates at level 2 provide students aged 16 to 18 with a route into a skilled trade or occupation, where employers recognise entry at this level (most construction trades, care work and hairdressing, for example). They also provide access to Tech Levels. Taught from September 2015, they require public backing from employers, giving students confidence that the qualification they are taking is genuinely valued. Tech Certificates support entry to a wide range of trades and practical occupations from plumbing to brick-laying, or horticulture to professional cookery. Like Tech Levels, they will offer students the chance to acquire the skills and expertise needed for the real economy – and provide a passport to a good job or a great apprenticeship.

## Independent and Special schools

### Independent schools

11.1. The completion and attainment and retention measures are not calculated for independent schools. This is because the Department does not have access to the relevant data.

11.2. Disadvantaged measures are not calculated for independent schools.

11.3. For the attainment measures, level 3 value added and English & maths progress measures information is sourced from awarding bodies. This allows us to calculate these headline measures for independent schools.

11.4. Destination Measures for independent schools will not be included in performance tables due to limited student level information. They will, though, continue to be produced in the Statistical First Release for independent schools where the cohort can be identified.

### Special schools

11.5. Students who need more specialised teaching and facilities may go to special schools. Special schools with sixth form students can currently choose to have their results included in the 16-18 performance tables; however, this policy is under review. Some special schools will have no results published for their students because they do not take the qualifications reported in these tables.

## Timescales for implementation

12.1. The timeline below covers the publication of the 2017 performance table measures. Shadow performance table measures which showed how the new measures for 2017 will look based on 2015/16 data were shared with schools and colleges in June 2017.

Results year	Data release	Publication date
2017 exam year	<b>Average grade</b> (academic, Applied General, Tech Levels and Level 2 vocational qualifications)	January 2018
	<b>Additional attainment</b> (Best 3 A levels, AAB in 2+ facilitating subjects, Tech Bacc, Tech Cert measure, Level 3 maths)	
	<b>L3 progress</b> (academic and Applied General)	
	<b>English &amp; maths progress</b>	
	<b>Disadvantaged measures</b> (Average grade, L3 progress, English and maths progress)	March 2018
	<b>Retention</b> (including new supporting retention measures – returned and retained for a second year; and retained and assessed)	
	<b>Completion and attainment</b> (Tech levels and level 2 vocational qualifications)	
<b>Disadvantaged measures</b> (Retention, completion and attainment)		



## Annex A: Detailed methodology for allocation

In order to identify which provider to report a student against in each year, the following **three** data sources have been used:

	Spring School Census	Individual Learner Record (ILR SN10 for 2016/17, SN14 for previous years)	Awarding Organisation Date
Select provider based on:	Where student is recorded as on-roll with a current/main enrolment status	Where student is recorded as studying a main course of study (including where students are also recorded on the spring school census with a subsidiary enrolment status).	Where student is recorded as having sat their exams (for providers that do not return the spring school census or ILR)
If students are returned in multiple data sources:	The ILR provider will be selected when the student is retained in their main course of study and either had the highest volume of exam results in ILR provider, or started their main course of study after the date of the spring school census (but before 1st May). Otherwise, the spring school census provider will be selected.		
		When a student did level 3 qualifications mainly in an independent school and small qualifications in college, the independent school will be selected.	
If students are returned multiple times in the same data source:	The school with an enrolment status of 'current' or 'main' will be selected. If the enrolment status is the same, the provider with the highest volume of entries (from awarding organisation data) will be selected	Where two of more courses are recorded in different providers, the following hierarchy is used to select the provider: <ol style="list-style-type: none"> <li>1. Aim started before 1 May</li> <li>2. Latest start data</li> </ol> <p>Where there are concurrent courses of study:</p> <ol style="list-style-type: none"> <li>3. Largest course of study</li> <li>4. Earliest start data</li> <li>5. Latest end data</li> </ol>	Provider with the highest volume of exams (based on size) will be selected

If the same provider was selected in all years of post-16 study, then all the student's outcomes have been reported against this one provider. However, if different providers were selected using the principles above, only the outcomes achieved in that year has been reported against the provider.

## Annex B: Performance point scores for each qualification

### Level 3 qualifications

A level and applied A level; AS level, applied AS level and core maths:

Grade	AS level or core maths Size: 0.5	A level Size: 1
	Points	Points
A*	N/A	60
A	25	50
B	20	40
C	15	30
D	10	20
E	5	10
Fail	0	0

Applied A level Double Award, AS level Double Award and combined A & AS level:

Grade	Double AS level Size: 1	Combined A and AS level Size: 1.5	Double A level Size: 2
	Points	Points	Points
A*A*	N/A	N/A	120
A*A	N/A	85.0	110
AA	50	75.0	100
AB	45	67.5	90
BB	40	60.0	80
BC	35	52.5	70
CC	30	45.0	60
CD	25	37.5	50
DD	20	30.0	40
DE	15	22.5	30
EE	10	15.0	20
Fail	0	0	0

**Extended Project (Diploma) and Principal Learning (Diploma):**

Grade	Extended Project (Diploma) Size: 0.3	Principal Learning (Diploma) Size: 1.5
	Points	Points
*	18	90
A	15	75
B	12	60
C	9	45
D	6	30
E	3	15
Fail	0	0

**Advanced Extension Award:**

Grade	Advanced Extension Award Size: 0
	Points
D	9.0
M	7.7
Fail	0

**Pre-U:**

Grade	Short Course subject Size: 0.5	Principal subject Size: 1
	Points	Points
D1	30.0	60.0
D2	27.1	54.2
D3	24.2	48.3
M1	21.3	42.5
M2	18.3	36.7
M3	15.0	30.0
P1	11.7	23.3
P2	8.3	16.7
P3	5.0	10.0
Fail	0	0

**Free-standing Mathematics Qualification level 3:**

Grade	Free-standing Mathematics Qualification Size: 0.17
	Points
A	8.20
B	6.53
C	4.87
D	3.20
E	1.53
Fail	0

**International baccalaureate:**

Grade	International Baccalaureate Diploma Programme Size: 5
	Points
Grade 45	300.0
Grade 44	290.5
Grade 43	281.0
Grade 42	271.5
Grade 41	262.0
Grade 40	252.5
Grade 39	243.0
Grade 38	233.5
Grade 37	224.0
Grade 36	214.5
Grade 35	205.0
Grade 34	195.5
Grade 33	186.0
Grade 32	176.5
Grade 31	167.0
Grade 30	157.5
Grade 29	148.0
Grade 28	138.5
Grade 27	129.0
Grade 26	119.5
Grade 25	110.0
Grade 24	100.5
Fail	0

**IBO standard and higher components:**

Grade	Standard level component Size: 0.5	Higher level component Size: 1
	Points	Points
7	25	60
6	20	48
5	15	36
4	10	24
3	5	12
2	0	0
1	0	0
Fail	0	0

**IBO core components:**

Grade	Reflective project Size: 0.2	Extended essay Size: 0.2	Theory of knowledge Size: 0.3
	Points	Points	Points
A	10	8	12
B	8	6	9
C	6	4	6
D	4	2	3
E	2	0	0
Fail	0	0	0

In the tables below it is important to note that the key factor in the grade structure is the number of grades – not the names of the grades. For example, a Pass/Merit/Distinction/Distinction\* grade structure is the same as a C grade/B grade/A grade/A\* grade structure, because there are four grades in both.

**One-grade structure, e.g. Pass only:**

Grade	Size	Points
<b>P</b>	<b>0.5</b>	15.0
	<b>0.75</b>	22.5
	<b>1</b>	30.0
	<b>1.25</b>	37.5
	<b>1.5</b>	45.0
	<b>1.75</b>	52.5
	<b>2</b>	60.0
	<b>2.25</b>	67.5
	<b>2.5</b>	75.0
	<b>2.75</b>	82.5
	<b>3</b>	90.0
	<b>3.25</b>	97.5
<b>3.5</b>	105.0	
<b>Fail</b>		0

**Two-grade structure, e.g. Pass/Merit:**

Grade	Size: 0.5	Size: 0.75
	Points	Points
<b>M</b>	20.0	30.00
<b>P</b>	12.5	18.75
<b>Fail</b>	0	0

**Three-grade structure, e.g. Pass/Merit/Distinction (size 0.5 to 1.25):**

Grade	Size: 0.5	Size: 0.75	Size: 1	Size: 1.25
	Points	Points	Points	Points
<b>D</b>	25.0	37.50	50	62.50
<b>M</b>	17.5	26.25	35	43.75
<b>P</b>	7.5	11.25	15	18.75
<b>Fail</b>	0	0	0	0

Three-grade structure, e.g. Pass/Merit/Distinction (size 1.5 to 2.25):

Grade	Size: 1.5	Size: 1.75	Size: 2	Size: 2.25
	Points	Points	Points	Points
D	75.0	87.50	100	112.50
M	52.5	61.25	70	78.75
P	22.5	26.25	30	33.75
Fail	0	0	0	0

Three-grade structure, e.g. Pass/Merit/Distinction (size 2.5 to 3):

Grade	Size: 2.5	Size: 2.75	Size: 3
	Points	Points	Points
D	125.0	137.50	150
M	87.5	96.25	105
P	37.5	41.25	45
Fail	0	0	0

Four-grade structure, e.g. Pass/Merit/Distinction/Distinction\* (size 0.5 to 1.25):

Grade	Size: 0.5	Size: 0.75	Size: 1	Size: 1.25
	Points	Points	Points	Points
D*	25.0	37.5.0	50	62.5.0
D	17.5	26.25	35	43.75
M	12.5	18.75	25	31.25
P	7.5	11.25	15	18.75
Fail	0	0	0	0

Four-grade structure, e.g. Pass/Merit/Distinction/Distinction\* (size 1.5 to 3):

Grade	Size: 1.5	Size: 1.75	Size: 2	Size: 3
	Points	Points	Points	Points
D*	75.0	87.50	100	150
D	52.5	61.25	70	105
M	37.5	43.75	50	75
P	22.5	26.25	30	45
Fail	0	0	0	0

**Five-grade structure, e.g. A\*/A/B/C/D:**

Grade	Size: 0.5	Size: 1.5	Size: 1.75	Size: 3
	Points	Points	Points	Points
<b>A*</b>	25	75	87.5	150
<b>A</b>	20	60	70.0	120
<b>B</b>	15	45	52.5	90
<b>C</b>	10	30	35.0	60
<b>D</b>	5	15	17.5	30
<b>Fail</b>	0	0	0	0

**Six-grade structure, e.g. A\*/A/B/C/D/E vocational qualifications:**

Grade	Size: 0.5	Size: 0.75	Size: 1	Size: 3
	Points	Points	Points	Points
<b>A*</b>	25	37.5	50	150
<b>A</b>	21	31.5	42	126
<b>B</b>	17	25.5	34	102
<b>C</b>	13	19.5	26	78
<b>D</b>	9	13.5	18	54
<b>E</b>	5	7.5	10	30
<b>Fail</b>	0	0	0	0

**Seven-grade structure, e.g. Pass Pass to Distinction\* Distinction\*:**

Grade	Size: 1.5	Size: 1.75	Size: 2	Size: 2.25	Size: 2.75
	Points	Points	Points	Points	Points
<b>D*D*</b>	75.00	87.50	100	112.50	137.50
<b>D*D</b>	63.75	74.38	85	95.63	116.88
<b>DD</b>	52.50	61.25	70	78.75	96.25
<b>DM</b>	45.00	52.50	60	67.50	82.50
<b>MM</b>	37.50	43.75	50	56.25	68.75
<b>MP</b>	30.00	35.00	40	45.00	55.00
<b>PP</b>	22.50	26.25	30	33.75	41.25
<b>Fail</b>	0	0	0	0	0



Ten-grade structure, e.g. Pass Pass Pass to Distinction\* Distinction\* Distinction\*:

Grade	Size: 2.75	Size: 3	Size: 3.25
	Points	Points	Points
<b>D*D*D*</b>	137.50	150	162.50
<b>D*D*D</b>	123.75	135	146.25
<b>D*DD</b>	110.00	120	130.00
<b>DDD</b>	96.25	105	113.75
<b>DDM</b>	87.08	95	102.92
<b>DMM</b>	77.92	85	92.08
<b>MMM</b>	68.75	75	81.25
<b>MMP</b>	59.58	65	70.42
<b>MPP</b>	50.42	55	59.58
<b>PPP</b>	41.25	45	48.75
<b>Fail</b>	0	0	0

## Level 2 qualifications

Note, one-grade structure qualifications can have different points depending on whether they are 'Pass only general' qualifications, or 'Pass only NVQ'.

**One-grade structure, Pass only general (most level 2 qualifications)**

Grade	Size	Points
<b>P</b>	<b>2</b>	12
	<b>3</b>	18
	<b>4</b>	24
	<b>5</b>	30
	<b>6</b>	36
	<b>7</b>	42
	<b>8</b>	48
	<b>9</b>	54
	<b>10</b>	60
	<b>11</b>	66
	<b>12</b>	72
<b>13</b>	78	
<b>Fail</b>		0

**One-grade structure, Pass only NVQ (NA2, NB2, NC2, ND2 qualification types)**

Grade	Size	Points
<b>P</b>	<b>4</b>	26.0
	<b>5</b>	32.5
	<b>6</b>	39.0
	<b>7</b>	45.5
<b>Fail</b>		0

**Two-grade structure, e.g. Pass/Merit structure:**

Grade	Size: 2	Size: 3	Size: 4	Size: 5
<b>M</b>	14	21.0	28	35.0
<b>P</b>	11	16.5	22	27.5
<b>Fail</b>	0	0	0	0

**Three-grade structure, e.g. Pass/Merit/Distinction structure:**

Grade	Size: 2	Size: 3	Size: 4	Size: 5	Size: 6	Size: 7	Size: 8	Size: 9	Size: 10	Size: 14
<b>D</b>	15	22.5	30	37.5	45	52.5	60	67.5	75	105
<b>M / C</b>	13	19.5	26	32.5	39	45.5	52	58.5	65	91
<b>P</b>	10	15.0	20	25.0	30	35.0	40	45.0	50	70
<b>Fail</b>	0	0	0	0	0	0	0	0	0	0

**Four-grade structure, e.g. Pass/Merit/Distinction/Distinction\* structure (size 2 to 7):**

Grade	Size: 2	Size: 3	Size: 4	Size: 5	Size: 6	Size: 7
<b>D*</b>	16	24	32	40	48	56
<b>D</b>	14	21	28	35	42	49
<b>M</b>	12	18	24	30	36	42
<b>P</b>	10	15	20	25	30	35
<b>Fail</b>	0	0	0	0	0	0

**Five-grade structure, e.g. 1/2/3/4/5**

Grade	Size: 2
<b>5</b>	14
<b>4</b>	13
<b>3</b>	12
<b>2</b>	11
<b>1</b>	10
<b>Fail</b>	0

**Six-grade structure, e.g. A\*/A/B/C/D/E**

Grade	Size: 3	Size: 5
<b>A*</b>	24.0	40.00
<b>A</b>	22.5	37.50
<b>B</b>	20.5	34.17
<b>C</b>	18.5	30.83
<b>D</b>	16.5	27.50
<b>E</b>	15.0	25.00
<b>Fail</b>	0	0

Ten-grade structure, e.g. Pass Pass Pass to Distinction\* Distinction\* Distinction\*

Grade	Size: 4
D*D*D*	32.00
D*D*D	30.67
D*DD	29.33
DDD	28.00
DDM	26.67
DMM	25.33
MMM	24.00
MMP	22.67
MPP	21.33
PPP	20.00
Fail	0

## Qualifications with grades spanning Level 1 / Level 2

Five-grade structure, e.g. P1/P2/M2/D2/\*2 and 1/2/3/4/5

Grade	Size: 3
*2	24.0
D2	21.0
M2	18.0
P2	15.0
P1	7.5
Fail	0

Seven-grade structure, e.g. P1/M1/D1/P2/M2/D2/\*2

Grade	Size: 3
*2	24.0
D2	21.0
M2	18.0
P2	15.0
D1	12.0
M1	9.0
P1	4.5
Fail	0

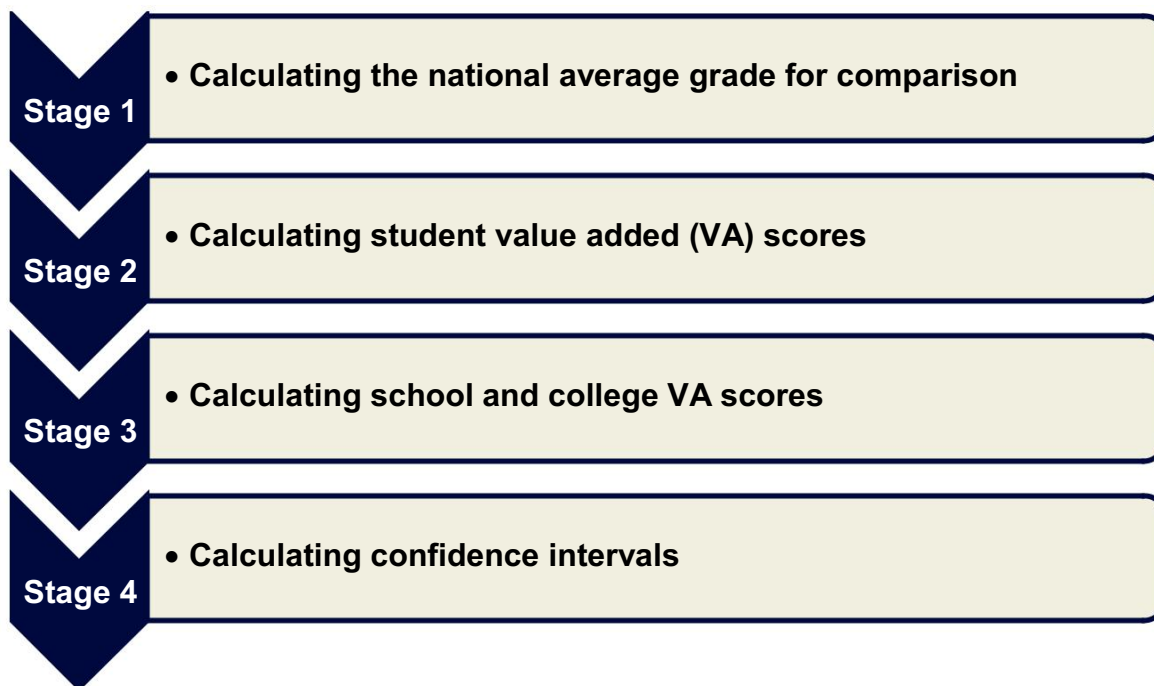
**Eight-grade structure: e.g. Pass at L1 to Distinction\* Distinction\***

<b>Grade</b>	<b>Size: 3</b>	<b>Size: 4</b>	<b>Size: 5</b>
<b>D*D*</b>	24.0	32	40.0
<b>D*D</b>	22.5	30	37.5
<b>DD</b>	21.0	28	35.0
<b>DM</b>	19.5	26	32.5
<b>MM</b>	18.0	24	30.0
<b>MP</b>	16.5	22	27.5
<b>PP</b>	15.0	20	25.0
<b>P1</b>	7.5	10	12.5
<b>Fail</b>	0	0	0

# Annex C: Detailed Level 3 Value Added calculations

## Overview of the measure

The figure below provides a snapshot of the level 3 value added (L3VA) calculation. It contains four main steps where each step will be explained in detail in the following sections.



## Calculating the national average grade for comparison

This is the first step of how the L3VA calculation works. It sets out the methodology for calculating national average levels of progress and explains how student's prior attainment is defined.

## Calculating average prior attainment at key stage 4

The starting point for the L3VA calculation is to determine each student's key stage 4 prior attainment.

Different qualifications are taken into account when calculating VA scores for qualifications in the academic or applied general cohorts. As a subset of the academic cohort, the calculation for the A level cohort follows the same method as the academic cohort:

### Academic qualification

- If academic VA scores are being calculated, the average prior attainment is based on students' GCSEs grades only.

### Applied General qualification

- If applied general VA scores are being calculated, the average prior attainment is based on all students' key stage 4 results.

- For both categories, only qualifications achieved during key stage 4 are included in the prior attainment calculation. Re-sits or additional qualifications gained during the 16-18 study phase are not included.
- Qualifications in the same subjects will be discounted.
- AS levels taken before a student reaches the end of key stage 4 are included in the prior attainment calculation for both academic and Applied General L3VA.
- Changes to qualifications included in key stage 4 performance tables from 2014 will apply to all students who finished KS4 in 2014 or later.

For students who reached the end of key stage 4 in 2014 or later, only qualifications approved for publication in key stage 4 performance table will be included, and key stage 4 point scores from 2014 and 2015 will be used (see here: [Key stage 4 performance points for qualifications counting in 2015 performance tables](#)). For these students, prior attainment will use the same discounting rules as key stage 4 performance tables: the first entry in each subject rather than the best entry will be used to calculate the average point score.

Key stage 4 points will change from 2016 and again in 2017 but this will not impact the majority of 16-18 students until 2018<sup>20</sup>.

For the 2017 tables, prior attainment averages will continue to be shown on the 0-58 points scale, rather than the 0-8 scale that was used in 2016 KS4 tables). We are currently reviewing the prior average attainment calculations to be used in the 2018 and 2019 tables which will also include some students who took reformed GCSEs at key stage 4.

#### Example 1

Student A achieved 5 GCSEs at grade A\* (worth 58 points each), 3 GCSEs at grade A (worth 52 points each) and 2 GCSEs at grade B (worth 46 points each) in key stage 4. Each GCSE entry is equivalent to a size of 1. So:

<sup>20</sup> The first new GCSEs with the new grading scale (1 to 9, with 9 being the top grade) are being taught from 2015. These learners will not have post-16 results until 2018.

$$\begin{aligned} \text{Total points} &= 5 \times 58 + 3 \times 52 + 2 \times 46 \\ &= 538 \end{aligned}$$

$$\begin{aligned} \text{Total size} &= 10 \times 1 \\ &= 10 \end{aligned}$$

$$\begin{aligned} \text{Total points/total size} &= 538/10 \\ &= 53.8 \end{aligned}$$

$$\begin{aligned} \text{Average prior attainment at key stage} &= \text{Average point score (APS) per entry 4} \\ &= 53.8^{**} \end{aligned}$$

\*\* This is used to calculate both academic and applied General VA scores.

## Example 2

Student B, who reached the end of key stage 4 in 2014, achieved 4 GCSEs at grade C (worth 40 points each) and an OCR Level 2 National Certificate at grade M (worth 46 points) in key stage 4.

Each qualification is equivalent to a size of 1, since the student reached the end of key stage 4 in 2014. So:

Academic qualification	Applied general qualification
For academic VA scores, only the student's GCSE grades are included:	For applied general VA scores, all of the student's key stage 4 qualifications are included:
Total points = 4*40 = 160	Total points = 4*40+1*46 = 206
Total size = 4*1 = 4	Total size = 5*1 = 5
Total points/total size = 160/4 = 40	Total points/total size = 206/5 = 41.2
Average prior attainment at key stage 4 = APS per entry = 40	Average prior attainment at key stage 4 = APS per entry = 41.2

## Calculating the national average grade

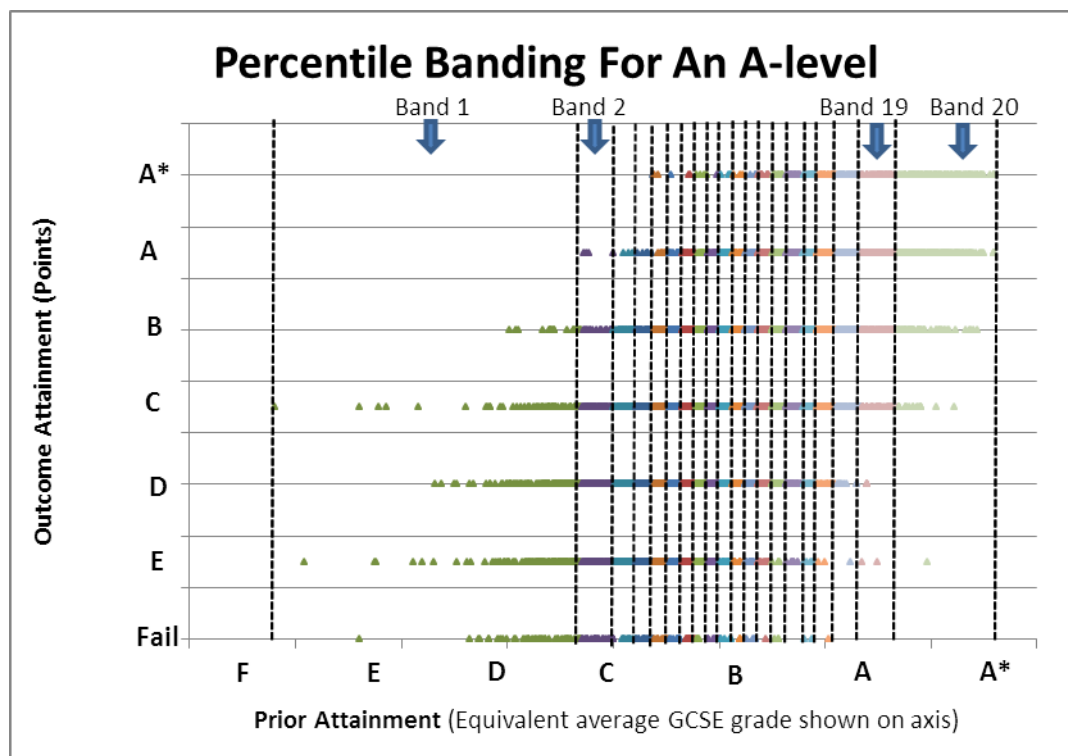
After determining each student's key stage 4 average prior attainment, the next step is to calculate the national average grade of every level 3 qualification type that will be included within the L3VA report for comparison.

At the start, data for a particular subject are taken – for example A level design and technology<sup>21</sup>.

<sup>21</sup> This example shows an A level but the methodology is equivalent for both academic and applied general qualifications.

For each student taking this subject, their average key stage 4 prior attainment and their A level grade are plotted on a chart and divided into 20 bands<sup>22</sup> based on their prior attainment. Each band contains the same number of students.

The first band contains the 5 per cent of students with the lowest prior attainment. These mainly achieved C, D or E grades in their GCSEs. The 20<sup>th</sup> band contains the 5 per cent of students with the highest prior attainment. They mainly achieved A\*, A or B grades in their GCSEs.



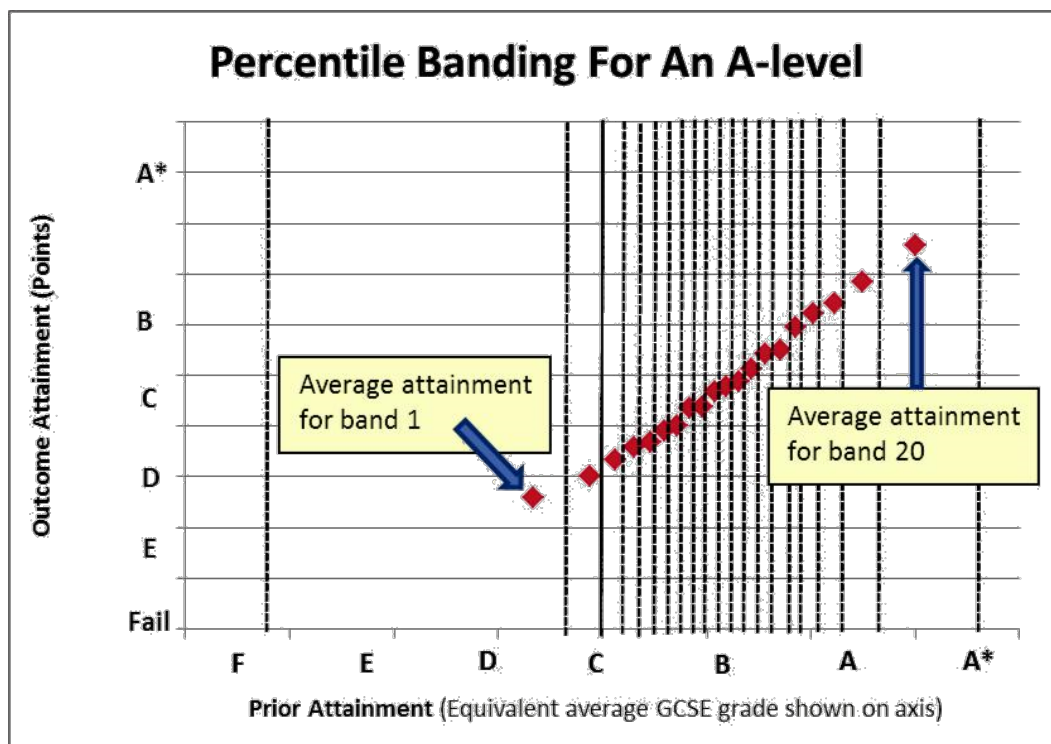
The average attainment for each of these 20 bands can then be calculated. As prior attainment increases, the 16-18 attainment will typically increase<sup>23</sup>. This reflects the fact that students who get better grades at key stage 4 typically do better at 16-18.

<sup>22</sup> There are usually 20 bands. However, if the 20 bands model does not fit well for a qualification due to various reasons this is reduced to 10 bands, 5 bands or 1 band. 1 band is used where there is a poor relationship between prior attainment at key stage 4 and outcome in level 3 qualifications, for example where there are only a small number of students entering the qualification.

<sup>23</sup> Where the outcome attainment does not increase steadily with prior attainment, bands will be combined to create an average attainment based on a larger number of students. This will ensure a steadily increasing or level line. The methodology used is called “pool adjacent violators smoothing”.

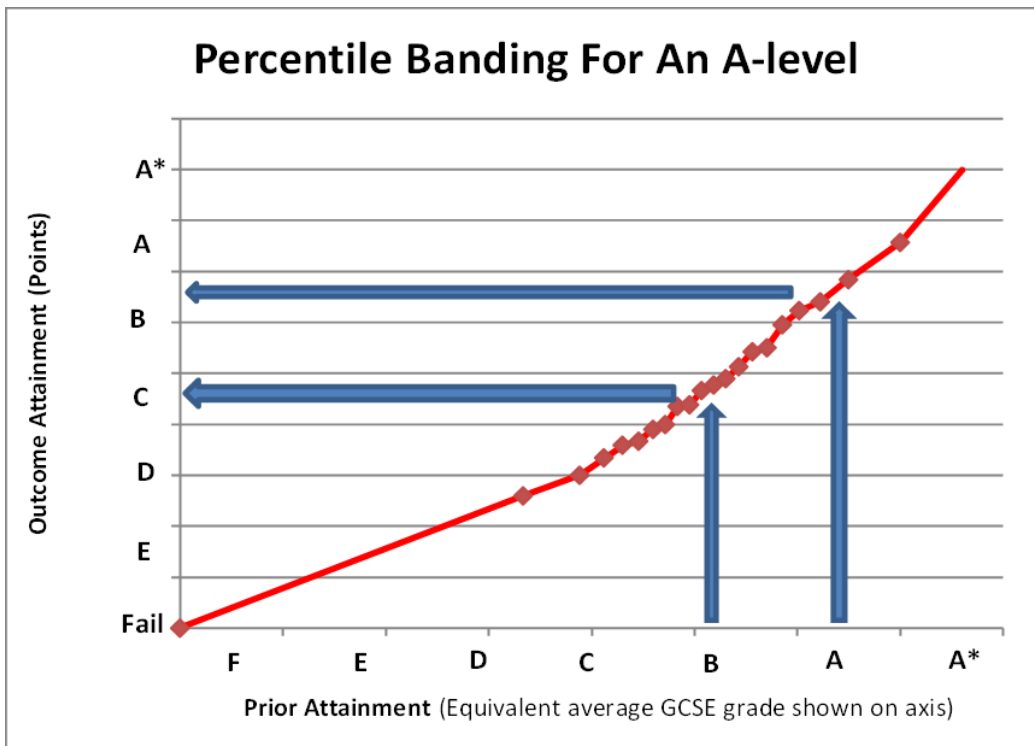


In the example below, for band 1, the students with the lowest attainment, the average A level grade in this subject is just below a D grade. For band 20, the students with the highest prior attainment, the average A level grade in this subject is around an A grade.



These averages can then be “joined up” by drawing a straight line between the points to get a line of average attainment which shows that students with higher prior attainment typically get better grades. The line is also extrapolated with the lowest and highest grades achieved in the qualification type being the starting and ending points respectively.

For example, the figure below shows that students whose average prior attainment was equivalent to a B grade at GCSE on average attain a C grade at this A level.



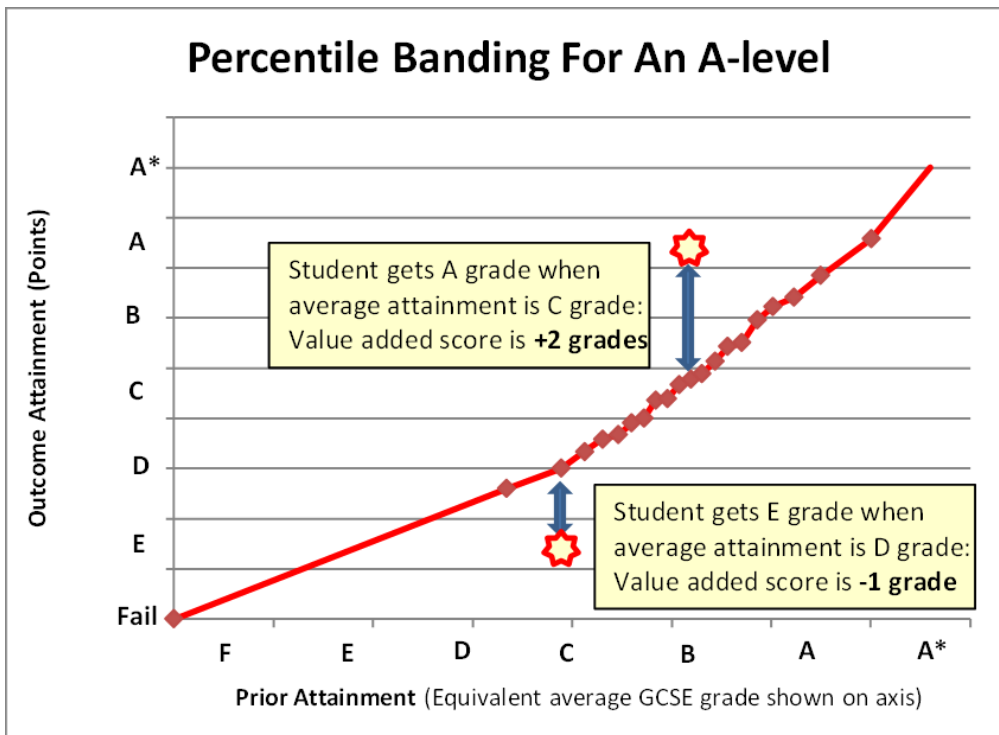
## Calculating value added scores

This is the second step of how the new L3VA calculation works.

## Calculating student value added scores for individual qualifications

The line of average attainment from the previous section can then be used to calculate the VA scores. These are the difference between actual A level attainment and average A level attainment for students with the same key stage 4 prior attainment.

For example, if a student achieves an A grade when the average attainment for a student with that prior attainment in that subject was a C grade, the VA score is +2 grades. Where the difference between the average attainment and the actual attainment is a fraction of a grade, the VA score will be a decimal. VA scores are reported to 2 decimal points.



The percentile banding approach allows for the average attainment to be calculated in a way that closely aligns with the underlying data. This minimises any bias for certain groupings of prior attainment which can occur if a “line of best fit” is used.

## School and college value added scores

School and college VA scores for individual qualifications (e.g. A level chemistry), qualification types (e.g. A Levels) and overall academic and applied general qualifications can also be calculated. This is explained in the following sections.

## Calculating value added scores for individual qualifications

Once the student VA scores have been calculated for a particular qualification, the average of all the student VA scores for that qualification is calculated within the school or college.

The figure below shows an example of how a school or college VA score is calculated from 5 student VA scores in an individual qualification.

### Example

Student 1 VA score	= +0.25
Student 2 VA score	= +0.35
Student 3 VA score	= +0.50
Student 4 VA score	= -0.60
Student 5 VA score	= -0.80
School or college VA score in the qualification (e.g. A level maths)	= $\frac{+0.25+0.35+0.50-0.60-0.80}{5}$
	= -0.06 A level grades

## Formulae

The information required to perform this calculation is detailed below:

Variable	Description
$n$	Number of exam records in qualification per school/college
$\underline{u}$	Array of exam record VA scores

## Calculating value added scores for a qualification

A qualification VA score for a school or college is calculated by finding the average of all the exam level VA scores in that qualification and in that institution.

$$VA_{avg} = \frac{\sum_{i=1}^n u_n}{n} \quad \text{where } \underline{u}_n = \text{the VA score of the } n_{th} \text{ exam record}$$

Hence, the overall institution VA score  $U$  for the given qualification is  $U = VA_{avg}$ .

## Calculating value added scores for qualifications types

After the VA scores for each qualification have been determined, the qualification type VA scores for the school or college can be calculated by finding the sum of the VA scores for each qualification within the type, divided by the total number of students taking each individual qualification.

### Example

A level history VA score	= +0.25
Number of students	= 50
A level economics VA score	= -0.70
Number of students	= 20
A level maths VA score	= +0.35
Number of students	= 100
A level VA score	= $\frac{(50 \times +0.25) + (20 \times -0.70) + (100 \times +0.35)}{50 + 20 + 100}$
	= +0.20 A level grades

## Formulae

The information required to performance this calculation is as follows:

Variable	Description
$VA_{QualSubj}$	VA score for a particular qualification within a given qualification type at school/college level
$VA_{Qual}$	Aggregate VA score across qualifications within a given qualification type at school/college level
$n_{ExamQualSubj}$	Number of exams for a particular qualification at school/college level
$n_{ExamQuals}$	Number of exams across all qualifications within a given qualification type at school/college level
$\omega$	Weighting factor for selected qualifications, $\omega = 1$ for all qualifications, except General Studies, where $\omega = 0.5$

### Calculating value added scores for a qualification type

The formula below is used to calculate aggregate VA scores for qualification types for a school or college. This formula is used for each qualification type that a school or college offers:

$$VA_{Qual} = \frac{\sum_1^{TotalSubjs} VA_{QualSubj} \cdot n_{ExamQualSubj} \cdot \omega}{\sum n_{ExamQualSub} \cdot \omega}$$

### Calculating academic and Applied General qualifications value added score

Finally, using VA scores for all qualifications, school and college overall academic and Applied General VA scores can be calculated.

Academic VA scores are the average of all academic qualification type VA scores. This calculation is weighted by the relative size of each qualification type. Applied General scores are calculated likewise.

#### Example

Below is the summary of all qualification type VA scores for an example school:

Qualification type	VA score	Number of students	Qualification type size
A level chemistry	+0.50	50	1.0
AS level maths	-0.15	100	0.5
BTEC Level 3 subsidiary diploma business studies	+0.30	30	1.0
Level 3 Foundation Diploma in art and design	-0.10	60	2.0

So:

Academic VA scores	Applied general VA scores
$\text{Total points} = (50 * +0.50 * 1) + (100 * -0.15 * 0.5)$ $= 17.5$	$\text{Total points} = (30 * +0.30 * 1) + (60 * -0.10 * 2)$ $= -3$
$\text{Total sizes} = 50 * 1 + 100 * 0.5$ $= 100$	$\text{Total sizes} = 30 * 1 + 60 * 2$ $= 150$
$\text{Total points/total} = \text{VA scores}$ $\text{sizes} = 17.5/100$ $= +0.175 \text{ A level grades}$	$\text{Total points/total} = \text{VA scores}$ $\text{sizes} = -3/150$ $= -0.02 \text{ BTEC grades}$

### Formulae

The information required to perform this calculation is detailed below:

Variable	Description
$VA_{ACVQ}$	School or college's overall academic or applied general VA score
$N_{QualACVQ}$	The number of academic or applied general qualifications for that school or college
$VA_{Qual}$	School or college's VA score for given academic or applied general qualification (e.g. A level physics VA score)
$\mu_{Qual}$	National average VA score for a given academic or applied general qualification
$n_{Qual}$	Number of entries within school or college within given academic or applied general qualification
$Vol_{Qual}$	The size of the qualification type for the given academic or applied general qualification, in relation to A Levels (for academic qualifications) or BTEC level 3 Subsidiary Diplomas (for applied general qualifications)

### Calculating value added scores for academic and Applied General qualification

The formula below is used to calculate aggregated VA scores for academic and applied general qualifications. As this VA score combines information from different qualification types, the  $Vol_{Qual}$  variable is included in the formula.

$$VA_{ACVQ} = \frac{\sum_1^{N_{QualACVQ}} ((VA_{Qual} - \mu_{Qual}) \cdot n_{Qual})}{\sum_1^{N_{QualACVQ}} (n_{Qual} \cdot Vol_{Qual})}$$

This step includes a small adjustment to correct for aggregation error. This means the student average VA score is 0 rather than the institution average. This may mean there is a small inconsistency with qualification type and individual qualification scores. For example, if an institution only offered A levels, then their A levels score could be slightly

different from their aggregate academic score, even though they are calculated from the same results.

## Confidence intervals for L3VA

This is the final step of how the new L3VA calculation works.

### Purpose of confidence intervals

The L3VA measure is used to determine how effective a school or college is in helping their students make progress. However, the VA scores of a school or college are derived from a given set of students' results for a particular test paper on a particular day. In addition, it is known that the school or college is not the only influence on students' attainment. In fact, there are many random factors which will make a considerable impact on students' attainment, such as their home life or any private tuition they receive. As such, confidence intervals are used to capture the uncertainty of the L3VA measure.

### Calculating confidence intervals around a school or college's qualification value added score

The information required to perform this calculation is detailed below:

Variable	Description
$\sigma^2$	National variance of error
$n$	Number of exam records in qualification per school/college
$\underline{u}$	Array of exam record VA scores
$\psi$	Standard error per qualification per school/college

Using the standard error, it is possible to calculate confidence intervals around a school or college's qualification value added score.

$$\psi = \sqrt{\sigma^2/n}$$

The 95% confidence interval around a school or college's qualification VA score is then given by:

$$U \pm 1.96\psi$$

### Calculating confidence intervals around a school or college's qualification type value added score

The information required to performance this calculation is as follows:

Variable	Description
$VA_{QualSubj}$	VA score for a particular qualification within a given qualification type at school/college level

$VA_{Qual}$	Aggregate VA score across qualifications within a given qualification type at school/college level
$n_{ExamQualSubj}$	Number of exams for a particular qualification at school/college level
$n_{ExamQuals}$	Number of exams across all qualifications within a given qualification type at school/college level
$\Psi_{QualSubj}$	Standard error for a given qualification at school/college level
$\Psi_{VA_{Qual}}$	Standard error for a given qualification type at school/college level
$\omega$	Weighting factor for selected qualifications, $\omega = 1$ for all qualifications, except General Studies, where $\omega = 0.5$

It is then possible to calculate 95% confidence intervals around the school or college's qualification type VA score. To do this, the standard error for the qualification type needs to be determined first:

$$\psi_{VA_{Qual}} = \sqrt{\sum_1^{n_{ExamQualSubj}} \left( \frac{n_{ExamQualSubj}}{n_{ExamQuals}} \right)^2 \cdot \psi_{QualSubj}^2}$$

With the standard error for the qualification type, the following equation can be used to calculate confidence intervals around the VA score:

$$VA_{Qual} \pm 1.96\psi_{VA_{qual}}$$

## Calculating confidence intervals around a school or college's academic or applied general value added score

The information required to perform this calculation is detailed below:

Variable	Description
$VA_{ACVQ}$	School or college's overall academic or applied general VA score
$N_{QualACVQ}$	The number of academic or applied general qualifications for that school or college
$VA_{Qual}$	School or college's VA score for given academic or applied general qualification (e.g. A level physics VA score)
$\mu_{Qual}$	National average VA score for a given academic or applied general qualification
$n_{Qual}$	Number of entries within school or college within given academic or applied general qualification
$Vol_{Qual}$	The size of the qualification type for the given academic or applied general qualification, in relation to A Levels (for academic qualifications) or BTEC level 3 Subsidiary Diplomas (for applied general qualifications)
$\Psi_{VA_{ACVQ}}$	Standard error of overall academic or applied general value added score



$\psi_{Qual}$ 

Standard error for the VA score for the given academic or applied general qualification

It is possible to calculate confidence intervals around each sector subject area (across qualification types) VA score. To do this, the standard error must first be calculated which is given by the formula below:

$$\psi_{VA_{ACVQ}} = \sqrt{\sum_1^{N_{QualACVQ}} \left( \frac{n_{Qual} \cdot Vol_{Qual}}{\sum_1^{N_{QualACVQ}} (n_{Qual} \cdot Vol_{Qual})} \right)^2 \cdot \left( \frac{\psi_{Qual}}{Vol_{Qual}} \right)^2}$$

With the academic or applied general standard error, the following equation can be used to calculate confidence intervals around the VA score:

$$VA_{ACVQ} \pm 1.96 \cdot \psi_{VA_{ACVQ}}$$

There was an error with this stage of the confidence interval calculations in the 2016 performance tables and the formula above was not correctly applied to the data. This means that for some schools and colleges the confidence interval published was narrower than it should have been, whilst for others it was wider. This has been corrected ahead of the 2017 tables.

## Understanding school and college confidence intervals

95% of the time, a school or college's true score will fall within the confidence interval.

A school or college's confidence interval is always centred on the school or college's VA score. For example, if a school or college's VA score is +1 and the size of their confidence interval is 0.5 grades, then the confidence interval ranges between +0.5 and +1.5 (i.e. half a grade either side of the VA score).

The size of the confidence interval is largely determined by the number of students in the school or college that completed the level 3 qualification. Schools and colleges with fewer students completing the qualification have wider confidence intervals because their VA score is based on a smaller number of students, and so there is less evidence on which to judge the school or college's effectiveness.

School and college confidence intervals can be interpreted to give one of three conclusions:

- a school or college is **significantly below** the national average;
- a school or college is **not significantly different** to the national average;
- a school or college is **significantly above** the national average.

The national average VA score is 0.

## Calculation of statistical significance of value added scores

A school or college qualification VA score (denoted  $U$ ) is defined to be below the national average and statistically significant when their VA score is below 0 and their upper end of the 95% confidence interval is below 0. This can be expressed formulaically as:

$$U < 0 \quad \& \quad (U + 1.96\psi) < 0$$

A school or college qualification VA score (denoted  $U$ ) is defined to be above the national average and statistically significant when their VA score is above 0 and their lower end of the 95% confidence interval is above 0. This can be expressed formulaically as:

$$U > 0 \quad \& \quad (U - 1.96\psi) > 0$$

### Statistical significance at qualification type level

A school or college qualification type VA score is defined to be below the national average and statistically significant when their VA score is below 0 and their upper end of the 95% confidence interval is below 0. This can be expressed formulaically as:

$$VA_{Qual} < 0 \quad \& \quad (VA_{Qual} + 1.96\psi_{VA_{Qual}}) < 0$$

A school or college qualification VA score defined to be above the national average and statistically significant when their VA score is above 0 and their lower end of the 95% confidence interval is above 0. This can be expressed formulaically as:

$$VA_{Qual} > 0 \quad \& \quad (VA_{Qual} - 1.96\psi_{VA_{Qual}}) > 0$$

### Statistical significance at academic or applied general level

A school or college academic or applied general VA score is defined to be below the national average and statistically significant when their VA score is below 0 and their upper end of the 95% confidence interval is below 0. This can be expressed formulaically as:

$$VA_{ACVQ} < 0 \quad \& \quad (VA_{ACVQ} + 1.96 \cdot \psi_{VA_{ACVQ}}) < 0$$

A school or college academic or applied general VA score is defined to be above the national average and statistically significant when their VA score is above 0 and their lower end of the 95% confidence interval is above 0. This can be expressed formulaically as:

$$VA_{ACVQ} > 0 \quad \& \quad (VA_{ACVQ} - 1.96 \cdot \psi_{VA_{ACVQ}}) > 0$$

## Annex D: Further details of the completion and attainment measure

### Example of how the completion and attainment measure works

This example is for Tech Levels but the methodology is equivalent for level 2 vocational qualifications.

Below is a simplified example of how the completion and attainment measure works for an institution with 2 subjects and 9 students. First, we calculate subject level attainment by adding together the point scores for each outcome. Students who withdraw before completing the qualification are treated as fails. These subject level attainment scores are then compared with the national average to give a completion and attainment score for each subject.

In this example the institution has higher absolute attainment in plumbing than hairdressing, but worse relative attainment. This means there is no advantage from institutions entering students into subjects that are perceived to be easier.

These subject level relative attainment scores are then aggregated into overall completion and attainment scores for Tech Levels. For Tech Levels we convert from point scores to grades by dividing by 10.

	Entry	Outcome (Points)	Subject Level Attainment	Compare With National Average	Provider's Overall Score
Hairdressing (level 3) with a subject size (compared with an A level) of 1.5	Student A	Distinction (35)	Institution Average Point Score = 25 points (equal to a merit)	Hairdressing National Average = <b>24 points</b> Difference = 25 – 24 = + 1 point	Weighted Average (for each subject calculate the number of students multiplied by the points difference, find the total and then divide by the total sum of subject sizes)
	Student B	Merit (25)			
	Student C	Pass (15)			
	Student D	Distinction* (50)			
	Student E	Fail (0)			
Plumbing (Level 3) with a subject size (compared with an A level) of 1	Student F	Withdrawal (0)	Institution Average Point Score = 27.5 points (just above a merit)	Plumbing National Average = <b>29 points</b> Difference = 27.5 – 29 = – 1.5 points	$= \frac{(5 \times 1) + (4 \times -1.5)}{(5 \times 1.5) + (4 \times 1)}$ = – 0.09 points A score of – 0.09 points is equivalent to being – 0.01 grades below average.
	Student G	Distinction* (50)			
	Student H	Merit (25)			
	Student I	Distinction (35)			

## Subject grouping for fairer matching

In the ILR / school census data, institutions record the specific courses that their students take. There is a reference number that identifies the awarding organisation, subject and the amount of learning normally required. For example, if put in terms of guided learning hours needed to complete an A level, a diploma is worth 2 A levels.

To match learning aim records and attainment data over a three-year period we group together similar subjects to increase flexibility for institutions to change the number of learning hours a student spends on a course. It improves the match rate and therefore decreases the number of instances where we award a fail.

Subject grouping methodology has changed from 2016. Qualifications of the same subject with different awarding bodies are now grouped together rather than grouped separately. Below are two examples of the subject groups used for the completion and attainment measure.

1. Two Tech Levels are grouped into one, accommodating qualifications of different sizes and grade structures.

Qualification number	Qualification description	Subject group	Subject size (compared with an A level)	Subject grade structure
50071373	Pearson BTEC Level 3 Diploma in Construction and the Built Environment (QCF)	Construction Tech	2	**/*D/DD/DM/MM/MP/PP/F
50071397	Pearson BTEC Level 3 Extended Diploma in Construction and the Built Environment (QCF)	Construction Tech	3	***/**D/*DD/DDD/DDM/DMM/MM/M/MMP/MPP/PP/P/F

The created subject group in Tech Levels is: **Construction Tech**

2. Two level 2 vocational qualifications are grouped into one, accommodating qualifications of different sizes, grade structures and awarding organisations.

Qualification number	Qualification description	Subject group	Subject size (compared with a GCSE)	Subject grade structure
5007930X	Pearson BTEC Level 2 Diploma in Creative Media Production (QCF)	Multimedia	4	D*/D/M/P/F
60139274	UAL Level 2 Diploma In Creative Media Production & Technology (QCF)	Multimedia	5	D/M/P/F

The created subject group in level 2 vocational qualifications is: **Multimedia**

## Determining the size of an aim or result for the completion and attainment measure

An important part of the completion and attainment process is to compare students' attainment with the national average in the same subject of the same size and grade structure. The size of the qualification/aim is defined accordingly:

- **A student who completes a course and achieves an exam result**
  - The size of the result is determined by the size of the exam result. If there is more than one, the largest size counts. For example, if a student had results for both the diploma and extended diploma in the above table, their result would be weighted to the size of 3 A levels.
- **A student who completes a course with no exam result or is withdrawn**
  - The size of the fail result will be the size of the largest aim in the ILR / autumn school census data for the particular subject grouping.

### Examples of how the size of an aim or result is determined

The examples below are for Tech Levels but the methodology is equivalent for level 2 vocational qualifications.

For a student with one aim and exam result of the same size, that size is chosen.

Subject grouping	Aim size (in A levels)	Completion status	Exam results?	Exam result size (in A levels)	Size (in A levels) for completion and attainment
Art & Design	3	Completed	Yes	3	3

For a student with one aim and an exam result of a different size, the size of the exam result is selected. The completion and attainment score will therefore be based on size 2 (diploma) rather than size 3 (extended diploma).

Subject grouping	Aim size (in A levels)	Completion status	Exam results?	Exam result size (in A levels)	Size (in A levels) for completion and attainment
Art & Design	3	Completed	Yes	2	2

For a student with two aims where one is completed and the other is withdrawn and there are no exam results, the largest aim size (3) is selected. Assuming these aims are from the same institution only one fail is included in the completion and attainment score.

Subject grouping	Aim size (in A levels)	Completion status	Exam results?	Exam result size (in A levels)	Size (in A levels) for completion and attainment
Art & Design	3	Completed	No	N/A	3
Art & Design	2	Withdrawn	No	N/A	

## Performance points scores for each qualification

### Level 2 qualifications

Please note that the completion and attainment measure uses a separate points scale to other performance measures, for qualifications at level 2, or which span levels 1 and 2.

#### Two-grade structure, e.g. Pass/Merit structure:

Grade	Size: 2	Size: 3	Size: 4	Size: 5
<b>M</b>	6	9.0	12	15.0
<b>P</b>	3	4.5	6	7.5
<b>Fail</b>	0	0	0	0

#### Three-grade structure, e.g. Pass/Merit/Distinction structure:

Grade	Size: 2	Size: 3	Size: 4	Size: 5	Size: 6	Size: 7	Size: 8	Size: 9	Size: 10	Size: 14
<b>D</b>	8	12.0	16	20.0	24	28.0	32	36.0	40	56
<b>M / C</b>	6	9.0	12	15.0	18	21.0	24	27.0	30	42
<b>P</b>	3	4.5	6	7.5	9	10.5	12	13.5	15	21
<b>Fail</b>	0	0	0	0	0	0	0	0	0	0

#### Four-grade structure, e.g. Pass/Merit/Distinction/Distinction\* structure (size 2 to 7):

Grade	Size: 2	Size: 3	Size: 4	Size: 5	Size: 6	Size: 7
<b>D*</b>	8	12	16	20	24	28
<b>D</b>	6	9	12	15	18	21
<b>M</b>	4	6	8	10	12	14
<b>P</b>	2	3	4	5	6	7
<b>Fail</b>	0	0	0	0	0	0

#### Five-grade structure, e.g. 1/2/3/4/5

Grade	Size: 2	Size: 4
<b>5</b>	14	28
<b>4</b>	13	26
<b>3</b>	12	24
<b>2</b>	11	22
<b>1</b>	10	20
<b>Fail</b>	0	0

**Six-grade structure, e.g. A\*/A/B/C/D/E**

Grade	Size: 3	Size: 5
<b>A*</b>	10.5	17.50
<b>A</b>	9.0	15.00
<b>B</b>	7.0	11.67
<b>C</b>	5.0	8.33
<b>D</b>	3.0	5.00
<b>E</b>	1.5	2.50
<b>Fail</b>	0	0

**Ten-grade structure, e.g. Pass Pass Pass to Distinction\* Distinction\* Distinction\***

Grade	Size: 4
<b>D*D*D*</b>	13.33
<b>D*D*D</b>	12.00
<b>D*DD</b>	10.66
<b>DDD</b>	9.33
<b>DDM</b>	8.00
<b>DMM</b>	6.66
<b>MMM</b>	5.33
<b>MMP</b>	4.00
<b>MPP</b>	2.66
<b>PPP</b>	1.33
<b>Fail</b>	0

**Qualifications with grades spanning Level 1 / Level 2 (for completion and attainment measure)**

**Five-grade structure, e.g. P1/P2/M2/D2/\*2**

Grade	Size: 3
<b>*2</b>	15
<b>D2</b>	12
<b>M2</b>	9
<b>P2</b>	6
<b>P1</b>	3
<b>Fail</b>	0

**Seven-grade structure, e.g. P1/M1/D1/P2/M2/D2/\*2**

Grade	Size: 3
<b>*2</b>	21
<b>D2</b>	18
<b>M2</b>	15
<b>P2</b>	12
<b>D1</b>	9
<b>M1</b>	6
<b>P1</b>	3
<b>Fail</b>	0

**Eight-grade structure: e.g. Pass Pass to Distinction\* Distinction\***

Grade	Size: 3	Size: 4	Size: 5
<b>D*D*</b>	12.0	16	20.0
<b>D*D</b>	10.5	14	17.5
<b>DD</b>	9.0	12	15.0
<b>DM</b>	7.5	10	12.5
<b>MM</b>	6.0	8	10.0
<b>MP</b>	4.5	6	7.5
<b>PP</b>	3.0	4	5.0
<b>P1</b>	1.5	2	2.5
<b>Fail</b>	0	0	0



## Annex E: English and maths progress measure

### English and maths progress examples

#### Individual student progress in the same institution throughout

As the table below illustrates, the progress calculation uses the student's best result whilst at a particular institution.

		Attainment whilst at institution			
Scenario	Prior Attainment	Year 1	Year 2	Year 3	Student progress
Student A	GCSE grade D	GCSE grade E	GCSE grade C	N/A	5 - 4 = 1
	4 pts	3 pts	5 pts		
Student B	GCSE grade E	Functional skill L2	GCSE grade E	N/A	4 - 3 = 1
	3 pts	4pts	3pts		
Student C	GCSE grade F	ESOL Entry level	ESOL L1 Merit	ESOL L2 Pass	4 - 2 = 2
	2 pts	0.4 pts	2.5 pts	4 pts	
Student D	IGCSE grade E	FSM L1 grade E	FSM L1 grade D	FSM L1 grade E	1.7 - 3 = -1 (capped)
	3 pts	0.8 pts	1.7 pts	0.8 pts	
Student E	GCSE grade G	no entries	no entries	no entries	-1 (no entries)
	1 pt				
Student F	GCSE grade B	Not in scope			N/A
	6 pts				

- in the case of Student A therefore, the GCSE grade C (5pts) achieved in Year 2 (after KS4) discounts the grade E (3pts) achieved in Year 1.
- as long as the student is aged 16-18, it doesn't matter in which year the best results was achieved, so in the case of Student B and Student D the progress calculation uses their best achievements in Year 1, Year 2 and Year 3 respectively.
- student D gives an example of capping progress, where uncapped the student's progress would be -1.3, but is capped at -1.
- student E who had no entries in the 16-18 phase automatically scored -1

#### Individual student progress in multiple institutions

Calculating student progress when they attend multiple institutions in the 16-18 phase is slightly more complicated as the student's overall progress may be split across more than one institution, and each institution is only credited for progress made in that institution.

The table below considers another scenario (Student G), and retaining the exam profile throughout, imagines instead that the student attended 1, 2 or 3 different institutions in the 16-18 phase. Colour coding indicates when the student moved to a different institution (or is grey when the student didn't attend any school or college in that year).

Scenario	Prior Attainment	Attainment in 16-18 phase			Progress in Institution 1	Progress in Institution 2	Progress in Institution 3
		Year 1	Year 2	Year 3			
Student G - 1	1pt	2 pts	4 pts	3 pts	$4 - 1 = 3$	N/A	N/A
Student G - 2	1pt	2 pts	4 pts	3 pts	$2 - 1 = 1$	$4 - 2 = 2$	N/A
Student G - 3	1pt	2 pts	4 pts	3 pts	$4 - 1 = 3$	$3 - 4 = -1$	N/A
Student G-4	1pt	2 pts	4 pts	3 pts	better of: $\frac{2 - 1 = 1}{3 - 4 = -1}$	$4 - 2 = 2$	N/A
Student G - 5	1pt	2 pts	4 pts	3 pts	$2 - 1 = 1$	$4 - 2 = 2$	$3 - 4 = -1$

- Scenario 1 works in the same way as the examples A-F, so 4 pts is the best result in the 16-18 phase and the key stage 4 prior attainment of 1 pts is subtracted.
- Scenario 2 has the student move institutions after Year 1. Progress in the first institution uses Year 1 attainment (2 pts) from which the key stage 4 prior attainment of 1 is subtracted; however the best achievement in the second institution (4 pts) takes into account the progress made in the first institution, and so the prior attainment subtracted is now 2 pts.
- Scenario 4 is the most complex situation that is encountered and occurs when a student attends the same institution in Year 1 and Year 3, but another in Year 2.

In the case of Student G we see that the student makes progress in Year 1 (1 pt). However in Year 3 the student goes backwards compared to their Year 2 in a different institution (-1 pt). In this situation, where progress is both positive and negative, we report the positive progress in performance tables for Institution 1.

If the student had made positive progress in both Year 1 and Year 3 in Institution 1 then both sets of progress would be added together and reported against Institution 1.

## Multiple institutions and moving out-of-scope of tables

If a student attends multiple institutions, it becomes possible that they move out-of-scope. The table below illustrates this in the case of student H who achieves 5 points in year 2 (equivalent to GCSE grade C) and so is out-of-scope of the progress measure by the time they attend institution 2.

Scenario	Prior Attainment	Attainment in 16-18 phase			Progress in Institution 1	Progress in Institution 2	Progress in Institution 3
		Year 1	Year 2	Year 3			
Student H	1 pt	2 pts	5 pts	out-of-scope	$5 - 1 = 4$	N/A	N/A

## Condition of funding details: points to note

### Students with a GCSE grade D/3

The condition of funding states that a student with a grade D/3 at GCSE at key stage 4 should study for GCSE qualifications in the post-16 phase rather than stepping stone qualifications from 2015/16. This requirement is anticipated in the points that can be achieved through stepping stone qualifications set out in [section 7.23](#) and is why stepping stone qualifications are capped at 4 points; it means that students with a prior GCSE grade D/3 can only make positive progress through GCSE study<sup>24</sup>.

However, an exception is where students have a grade D/3 in English literature but whose English language attainment is lower. In that case the student is permitted to study a stepping stone qualification, and their attainment in English language is used to establish their level of prior attainment.

### Unregulated level 1/level 2 certificates in the English and maths measure

Unregulated level 1/level 2 certificates are included in the list of qualifications through which a student's prior attainment is determined. They are treated as equivalent to a GCSE in that students holding an unregulated level 1/level 2 certificate at grades A\*-C by age 16 in maths and either English language or literature (good passes in *both* language and literature are not needed) are not required to study maths and/or English in the 16-18 phase, and are excluded from this measure.

Where a student's highest prior attainment is an unregulated level 1/level 2 certificate at grade D or below, they will have to study English and/or maths, and for the purposes of determining the baseline for this measure their unregulated level 1/level 2 certificate grade equates to the same GCSE grade.

However, unregulated level 1/level 2 certificates are not approved for teaching post-16 as an equivalent to GCSEs under the condition of funding, and will not contribute to a student's calculated progress in the English and maths measure.

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<sup>24</sup> Progress is also possible via AS/A level qualifications, the International Baccalaureate and a limited number of other level 3 qualifications approved for teaching under the condition of funding too

## Annex F: Retention

### Headline retention measure

The following tables give examples of how the core aim is selected and show whether the students count as retained or not retained in the headline retention measure.

#### Example 1

The VR2 aim is selected as the core aim since it is the only one with size of at least 1. This student does not count as retained as they withdrew from the core aim.

Qualification type	Size	'Core aim' flagged by provider	Completion Status	Selected Core Aim	Retained?
AS level	0.5		Completed		
AS level	0.5		Completed		
AS level	0.5		Completed		
AS level	0.5		Completed		
VR2	1.3		Withdrawn	X	No

#### Example 2

The Tech Level VR3 aim is selected as the core aim since there are multiple completed aims and the majority of the student's attainment is Tech Level. This student counts as retained.

Qualification type	Size	'Core aim' flagged by provider	Completion Status	Selected Core Aim	Retained?
VR3	1.3		Completed	X	Yes
VR2	1.3		Completed		
VR2	1.3		Completed		
VR2	1.3		Continuing		
A level	1.0		Continuing		

#### Example 3

Although the IB qualification is the only one that the student did not complete, this is selected as their core aim due to its large size. This student does not count as retained as they withdrew from the core aim.

Qualification type	Size	'Core aim' flagged by provider	Completion Status	Selected Core Aim	Retained?
AS level	0.5		Completed		
AS level	0.5		Completed		
AS level	0.5		Completed		
International Baccalaureate	5.0		Withdrawn	X	No

#### Example 4

The BTEC Diploma level 3 qualification (size 1) is selected as the core aim as this vocational aim has been flagged by the provider as being the student's 'core aim'. This student does not count as retained as they withdrew from the core aim.

Qualification type	Size	'Core aim' flagged by provider	Completion Status	Selected Core Aim	Retained?
Extended Project	0.3		Completed		
AS level	0.5		Completed		
AS level	0.5		Completed		
BTEC Diploma level 3	2		Withdrawn		
BTEC Diploma level 3	2		Completed		
BTEC Diploma level 3	1	X	Withdrawn	X	No

#### Example 5

One of the AS level qualifications is arbitrarily selected as the core aim as the student only had 0.5 size aims, all of which were completed. This student counts as retained.

Qualification type	Size	'Core aim' flagged by provider	Completion Status	Selected Core Aim	Retained?
AS level	0.5		Completed	X	Yes
AS level	0.5		Completed		
AS level	0.5		Completed		
AS level	0.5		Completed		

## Returned and retained for a second year

The following tables give examples of whether the student counts as returned and retained for a second year and also show situations where a student is excluded from the measure.

#### Example 6

This student had aims in the institution in two academic years and spent a total of 657 days in the institution. They completed an aim of size 1+ in their second year so they count as returned and retained for a second year.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	VR3	1.5	09/09/2014	27/06/2015	Completed		
2	VR3	3.0	09/09/2015	26/06/2016	Completed	X	Yes

### Example 7

This student had aims in the institution in two academic years and spent a total of 690 days in the institution. The selected core aim was completed in their first year but they have other level 3 aims of size 1+ in their second year so they count as returned and retained for a second year.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	AS level	0.5	02/09/2014	23/07/2015	Completed		
1	AS level	0.5	02/09/2014	23/07/2015	Completed		
1	AS level	0.5	02/09/2014	23/07/2015	Completed		
1	A level	1.0	02/09/2014	23/07/2015	Completed	X	Yes
2	A level	1.0	01/09/2015	22/07/2016	Completed		
2	A level	1.0	01/09/2015	22/07/2016	Completed		
2	A level	1.0	01/09/2015	22/07/2016	Completed		

### Example 8

This student had aims in the institution in three academic years. Although they did not complete an aim of size 1+ in their second year, they did in their third year so they count as returned and retained for a second year.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	AS level	0.5	03/09/2013	19/07/2014	Completed		
1	AS level	0.5	03/09/2013	19/07/2014	Completed		
1	AS level	0.5	03/09/2013	19/07/2014	Completed		
2	AS level	0.5	02/09/2014	18/07/2015	Completed		
2	AS level	0.5	02/09/2014	18/07/2015	Completed		
2	AS level	0.5	02/09/2014	18/07/2015	Completed		
3	A level	1.0	01/09/2015	01/06/2016	Completed		
3	A level	1.0	01/09/2015	01/06/2016	Completed		
3	A level	1.0	01/09/2015	01/06/2016	Completed	X	Yes

### Example 9

This student had aims in the institution in two academic years and spent a total of 682 days in the institution. They did not complete a qualification of size 1+ in their second year so they do not count as returned and retained for a second year.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	AS level	0.5	06/09/2014	04/03/2015	Withdrawn		
1	AS level	0.5	06/09/2014	04/03/2015	Withdrawn		
1	AS level	0.5	06/09/2014	19/07/2015	Completed		
2	AS level	0.5	02/09/2015	18/07/2016	Completed		
2	AS level	0.5	02/09/2015	18/07/2016	Completed		
2	AS level	0.5	02/09/2015	18/07/2016	Completed	X	No

### Example 10

This student had aims in the institution in two academic years but only spent 432 days in the institution. Even though they completed a qualification of size 1, they do not count as returned and retained for a second year since they were not in the institution for long enough.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	BD3	1.0	09/09/2014	02/07/2015	Completed	X	No
2	BD3	2.0	09/09/2015	14/11/2015	Withdrawn		

### Example 11

This student had aims in the institution in one academic year. However, they are excluded from the returned and retained for a second year measure since they are aged 18 and although they may return for a second year, they will be too old to be included in performance tables.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	AS level	0.5	03/09/2015	22/07/2016	Completed		
1	AS level	0.5	03/09/2015	22/07/2016	Completed	X	N/A
1	AS level	0.5	03/09/2015	22/07/2016	Completed		
1	GCSE	0.3	03/09/2015	22/07/2016	Completed		

### Example 12

This student had aims in the institution in one academic year. However, they are excluded from the returned and retained for a second year measure since their level 3 qualifications of size 1 or above sum to 2 or more.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	AS level	0.5	04/09/2015	10/07/2016	Completed		
1	A level	1.0	04/09/2015	10/07/2016	Completed		
1	A level	1.0	04/09/2015	10/07/2016	Completed	X	N/A
1	A level	1.0	04/09/2015	10/07/2016	Completed		

### Example 13

This student had aims in the institution in two academic years and spent a total of 671 days in the institution. However, they are excluded from the returned and retained for a second year measure since their selected core aim is a level 2 qualification.

Year	Qualification type	Size	Aim start date	Aim end date	Completion Status	Selected Core Aim	Returned & retained for a 2 <sup>nd</sup> year?
1	AS level	0.5	09/09/2014	25/07/2015	Completed		
1	AS level	0.5	09/09/2014	25/07/2015	Completed		
2	VR2	1.3	04/09/2015	10/07/2016	Completed	X	N/A

## Retained and assessed

The following tables provide examples of whether a student is retained and assessed, and shows situations where a student would not be counted.

### Example 14

The student was retained in an A level core aim and was assessed in 5 exams. Two of these, the Applied General and Tech level assessments are of sufficient size and level to allow the student to be retained and assessed.

Core aim type	Core aim size	Core aim level	Exams taken	Exam size	Exam level	Retained and assessed?
<b>A level</b>	<b>1</b>	<b>3</b>	AS level	0.5	3	<b>Yes</b>
			AS level	0.5	3	
			AS level	0.5	3	
			Tech level	1	3	
			Applied General	1	3	

### Example 15

The student was retained in a BTEC Diploma level 3 qualification and was assessed in 3 exams. However, this student is not retained and assessed as the individual A level assessments do not match the size of the BTEC Diploma level 3.

Core aim type	Core aim size	Core aim level	Exams taken	Exam size	Exam level	Retained and assessed?
<b>BTEC Diploma Level 3</b>	<b>2</b>	<b>3</b>	A level	1	3	<b>No</b>
			A level	1	3	
			A level	1	3	

### Example 16

The student was retained in a BTEC Certificate level 2, and was assessed in 3 exams. However, this student would not be considered retained and assessed as even though the Tech level qualification is larger than the core aim, it is at a different level.

Core aim type	Core aim size	Core aim level	Exams taken	Exam size	Exam level	Retained and assessed?
<b>BTEC Certificate level 2</b>	<b>1</b>	<b>2</b>	AS level	0.5	3	<b>No</b>
			AS level	0.5	3	
			Applied general	1.5	3	



## Annex G: Destination measures – sources and methodology

Students who had previously been recorded as being at the end of 16-18 study are matched to a wide range of data sources which contain information about their activity in the following academic year.

This matching takes place at individual level using personal identifiers such as name, date of birth and postcode. Information on the students' activity throughout the following academic year, as recorded across these administrative datasets, is used to determine whether they sustained an education or employment destination, and the specific category they are recorded against.

### Data sources used

Many of the datasets used to determine whether a student continued participating in education form part of the National Pupil Database (NPD):

- individualised learner record (ILR) covering English further education (FE) sector colleges, other FE providers and specialist post-16 institutions (SPIs).
- school census (SC) covering state-funded schools in England. This includes state-funded and non-maintained special schools and pupil referral units (PRU) and the alternative provision (AP) census.
- awarding body data for independent schools
- Higher Education Statistics Agency (HESA) data covering United Kingdom higher education institutions and higher education alternative providers

The Longitudinal Educational Outcomes (LEO) dataset extends the national pupil database by linking employment, earnings and benefits data from other government departments to education data at an individual level. The administrative datasets are used as follows

- employment data from Her Majesty's Revenue and Customs (HMRC) including self-employment
- out-of-work benefit data from the Department for Work and Pensions (DWP)

These sources give reliable information about participation throughout the year and do not rely on self-report or activity at a single point in time. Activity was captured in these sources for 97% of 16-18 students in 2014/15. We cannot include evidence from sources beyond those listed at this point in time, but will continue to investigate further datasets for future years.

Additional information from the Universities & Colleges Admissions Service (UCAS) showing students having an accepted deferred offer for a UK higher education institution is shown alongside their recorded activity in the year.

## The headline measure: percentage staying in education or employment for at least two terms

To be included in the headline overall 'sustained destination' measure a student must be recorded as in education or employment for two terms the following academic year after completing 16-18 study.

To be counted they must have education or employment participation throughout the 6 months between October and March. A combination of education destinations or of education and employment is permitted, as is a one-month gap in participation within the 6 months to count as a sustained employment destination. If the month with no participation is March, participation must be recorded in April to count in the measure.

**Education destinations:** If the student stays in education throughout the 6 months, they are counted in education; whether or not they are also employed. If the sustained participation is fulfilled through two terms attendance at one type of institution, more specific subcategories identify the most common destinations: various types of higher education institution, and FE colleges and other FE providers. Less common institution types and sustained participation achieved only through a mixture of institution types are recorded as 'other education destinations'.

**Employment destination:** if the sustained participation is achieved only through employment, or through a combination of education and employment.

There are two categories which cover students not included in the measure:

- **Not staying in education or employment for two terms, or no sustained destination:** This includes those participating in education or employment at some point during the year but who did not have continuous participation October to March and a small number with no participation recorded but who claimed out-of-work benefits within the year.
- **Unknown, or Activity not captured in the data:** This includes young people who were not found in the source datasets. It includes both students who were matched to the HMRC/DWP data but had no employment activity in the year, and those who were not successfully matched to this source.

More details can be found in the [technical note](#) accompanying our statistical first release.

## Annex H: Data sources

These are the data sources for the 2017 performance tables:

Student 'on roll' status, for allocation of students to providers: spring school census for 2016/17, 2015/16 and 2014/15. For general guidance on the school census click here: <https://www.gov.uk/guidance/school-census>

Student core aim, for allocation of students to providers: ILR SN10 for 2016/17; ILR SN14 for 2015/16 and 2014/15. For general guidance on ILR click here: <https://www.gov.uk/government/collections/individualised-learner-record-ilr>

Students' learning aims, for retention and completion and attainment measures: ILR SN14 for 2016/17, 2015/16 and 2014/15.

Learning Aims from the autumn school census relating to learning completed in 2016/17, 2015/16 and 2014/15 academic years for retention and completion measures.

School census funding relating to learning completed in 2016/17, 2015/16 and 2014/15 academic years for retention and completion measures.

Students' exams in the 16-18 phase, and prior exams in English and maths: awarding organisation data for 2016/17 and earlier.

Students' prior attainment for Level 3 Value Added: end of key stage 4 final data (after key stage 4 amendments for each year) for students finishing key stage 4 in 2015/16, 2014/15 and 2013/14.

## Annex I: Facilitating Subjects

Qualification numbers for A level facilitating subjects, Awarding Organisations and qualification titles are listed below in the following tables for each facilitating subject.

### Biology

Qualifications counting as Biology in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	50023391	AQA level 3 Advanced GCE in Biology
AQA	50023408	AQA level 3 Advanced GCE in Human Biology
AQA	60146254	AQA level 3 Advanced GCE in Biology
CCEA	5002503X	CCEA level 3 Advanced GCE in Biology
OCR	50022362	OCR level 3 Advanced GCE in Biology
OCR	50024619	OCR level 3 Advanced GCE in Human Biology
OCR	60142601	OCR level 3 Advanced GCE in Biology A
OCR	60147209	OCR level 3 Advanced GCE in Biology B (Advancing Biology)
Pearson	50025934	Pearson Edexcel level 3 Advanced GCE in Biology
Pearson	60152990	Pearson Edexcel level 3 Advanced GCE in Biology A (Salters-Nuffield)
Pearson	60153015	Pearson Edexcel level 3 Advanced GCE in Biology B
WJEC	50024747	WJEC level 3 Advanced GCE in Human Biology
WJEC	50024759	WJEC level 3 Advanced GCE in Biology
WJEC	60157069	WJEC Eduqas level 3 Advanced GCE in Biology

### Chemistry

Qualifications counting as Chemistry in the 'AAB' 2017 16-18 performance tables indicator

Awarding	Qualification Number	Qualification Title
AQA	50026148	AQA level 3 Advanced GCE in Chemistry
AQA	60157318	AQA level 3 Advanced GCE in Chemistry
CCEA	50024942	CCEA level 3 Advanced GCE in Chemistry
OCR	50021898	OCR level 3 Advanced GCE in Chemistry B
OCR	50023470	OCR level 3 Advanced GCE in Chemistry A
OCR	60152552	OCR level 3 Advanced GCE in Chemistry A
OCR	60153714	OCR level 3 Advanced GCE in Chemistry B (Salters)
Pearson	50024267	Pearson Edexcel level 3 Advanced GCE in Chemistry
Pearson	60156466	Pearson Edexcel level 3 Advanced GCE in Chemistry
WJEC	50025028	WJEC level 3 Advanced GCE in Chemistry
WJEC	60156454	WJEC Eduqas level 3 Advanced GCE in Chemistry

## Physics

Qualifications counting as Physics in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	50025703	AQA level 3 Advanced GCE in Physics B: Physics in Context
AQA	5002615X	AQA level 3 Advanced GCE in Physics A
AQA	60147477	AQA level 3 Advanced GCE in Physics
CCEA	50024383	CCEA level 3 Advanced GCE in Physics
OCR	50022052	OCR level 3 Advanced GCE in Physics B
OCR	50025843	OCR level 3 Advanced GCE in Physics A
OCR	6014743X	OCR level 3 Advanced GCE in Physics A
OCR	60147453	OCR level 3 Advanced GCE in Physics B (Advancing Physics)
Pearson	50024358	Pearson Edexcel level 3 Advanced GCE in Physics
Pearson	60148482	Pearson Edexcel level 3 Advanced GCE in Physics
WJEC	50024693	WJEC level 3 Advanced GCE in Physics
WJEC	6015522X	WJEC Eduqas level 3 Advanced GCE in Physics

## Mathematics

Qualifications counting as Mathematics in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	10034080	AQA level 3 Advanced GCE in Mathematics
CCEA	10034328	CCEA Advanced GCE in Mathematics
OCR	10034183	OCR Advanced GCE in Mathematics (MEI)
OCR	10034353	OCR Advanced GCE in Mathematics
OCR	50027918	OCR level 3 Advanced GCE in Mathematics (Pilot)
Pearson	10034122	Pearson Edexcel level 3 Advanced GCE in Mathematics
WJEC	10034249	WJEC Advanced GCE in Mathematics
AQA	10060066	AQA level 3 Advanced GCE in Pure Mathematics
CCEA	1006011X	CCEA Advanced GCE in Pure Mathematics
OCR	10060194	OCR Advanced GCE in Pure Mathematics (MEI)
OCR	10060236	OCR Advanced GCE in Pure Mathematics
Pearson	10060157	Pearson Edexcel level 3 Advanced GCE in Pure Mathematics
WJEC	10060273	WJEC Advanced GCE in Pure Mathematics

## Further Mathematics

Qualifications counting as Further Mathematics in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	10060078	AQA level 3 Advanced GCE in Further Mathematics
CCEA	10060108	CCEA Advanced GCE in Further Mathematics
OCR	10060182	OCR Advanced GCE in Further Mathematics (MEI)
OCR	10060224	OCR Advanced GCE in Further Mathematics
OCR	50027906	OCR level 3 Advanced GCE in Further Mathematics (Pilot)
Pearson	10060145	Pearson Edexcel level 3 Advanced GCE in Further Mathematics
WJEC	10060261	WJEC Advanced GCE in Further Mathematics

## Geography

Qualifications counting as Geography in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	50025922	AQA level 3 Advanced GCE in Geography
AQA	6018940X	AQA Level 3 Advanced GCE in Geography
CCEA	50025375	CCEA level 3 Advanced GCE in Geography
OCR	50025855	OCR level 3 Advanced GCE in Geography
OCR	60185764	OCR Level 3 Advanced GCE in Geography
Pearson	50022386	Pearson Edexcel level 3 Advanced GCE in Geography
Pearson	60184176	Pearson Edexcel Level 3 Advanced GCE in Geography
WJEC	50024838	WJEC level 3 Advanced GCE in Geography
WJEC	60188479	WJEC level 3 Advanced GCE in Geography

## History

Qualifications counting as History in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	50025387	AQA level 3 Advanced GCE in History
AQA	60149735	AQA level 3 Advanced GCE in History
CCEA	50025521	CCEA level 3 Advanced GCE in History
OCR	50022702	OCR level 3 Advanced GCE in History B
OCR	50023329	OCR level 3 Advanced GCE in History A
OCR	60147015	OCR level 3 Advanced GCE in History A
Pearson	50022374	Pearson Edexcel level 3 Advanced GCE in History
Pearson	60146771	Pearson Edexcel level 3 Advanced GCE in History
WJEC	50024875	WJEC level 3 Advanced GCE in History

## English Literature

Qualifications counting as English Literature in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	50023123	AQA level 3 Advanced GCE in English Literature B
AQA	50025685	AQA level 3 Advanced GCE in English Literature A
AQA	60153271	AQA level 3 Advanced GCE in English Literature A
AQA	60153283	AQA level 3 Advanced GCE in English Literature B
CCEA	50024218	CCEA level 3 Advanced GCE in English Literature
OCR	50024899	OCR level 3 Advanced GCE in English Literature
OCR	60147258	OCR level 3 Advanced GCE in English Literature
Pearson	50026549	Pearson Edexcel level 3 Advanced GCE in English Literature
Pearson	60150464	Pearson Edexcel level 3 Advanced GCE in English Literature
WJEC	50029290	WJEC Level 3 Advanced GCE in English Literature
WJEC	60148706	WJEC Eduqas level 3 Advanced GCE in English Literature

## Modern and Classical Languages

Qualifications counting as Modern and Classical Languages in the 'AAB' 2017 16-18 performance tables indicator

Awarding organisation	Qualification Number	Qualification Title
AQA	50022088	AQA level 3 Advanced GCE in German
AQA	50022143	AQA level 3 Advanced GCE in Spanish
AQA	50023354	AQA level 3 Advanced GCE in Modern Hebrew
AQA	50023366	AQA level 3 Advanced GCE in Bengali
AQA	5002209X	AQA level 3 Advanced GCE in French
AQA	50023378	AQA level 3 Advanced GCE in Panjabi
AQA	60187293	AQA Level 3 Advanced GCE in German
AQA	60187323	AQA Level 3 Advanced GCE in Spanish
AQA	5002338X	AQA level 3 Advanced GCE in Polish
AQA	6018727X	AQA Level 3 Advanced GCE in French
CCEA	50024322	CCEA level 3 Advanced GCE in Irish
CCEA	50024334	CCEA level 3 Advanced GCE in French
CCEA	50024590	CCEA level 3 Advanced GCE in Spanish
CCEA	50024656	CCEA level 3 Advanced GCE in German
OCR	50021977	OCR level 3 Advanced GCE in French
OCR	50021989	OCR level 3 Advanced GCE in Spanish
OCR	50022295	OCR level 3 Advanced GCE in German
OCR	50023421	OCR level 3 Advanced GCE in Gujarati
OCR	50023433	OCR level 3 Advanced GCE in Dutch
OCR	50023445	OCR level 3 Advanced GCE in Turkish

OCR	50023457	OCR level 3 Advanced GCE in Persian
OCR	50023561	OCR level 3 Advanced GCE in Portuguese
OCR	5002596X	OCR level 3 Advanced GCE in Classics: Classical Greek
OCR	5002596X	OCR level 3 Advanced GCE in Classics: Latin
OCR	60182544	OCR level 3 Advanced GCE in Latin
OCR	60182556	OCR level 3 Advanced GCE in Classical Greek
Pearson	50023081	Pearson Edexcel level 3 Advanced GCE in Japanese
Pearson	50023093	Pearson Edexcel level 3 Advanced GCE in Arabic
Pearson	50023135	Pearson Edexcel level 3 Advanced GCE in Greek
Pearson	5002534X	Pearson Edexcel level 3 Advanced GCE in Urdu
Pearson	50025351	Pearson Edexcel level 3 Advanced GCE in Spanish
Pearson	50025363	Pearson Edexcel level 3 Advanced GCE in Russian
Pearson	50025430	Pearson Edexcel level 3 Advanced GCE in French
Pearson	50025442	Pearson Edexcel level 3 Advanced GCE in German
Pearson	50025454	Pearson Edexcel level 3 Advanced GCE in Italian
Pearson	50026495	Pearson Edexcel level 3 Advanced GCE in Chinese
Pearson	60187025	Pearson Edexcel Level 3 Advanced GCE in French
Pearson	60187049	Pearson Edexcel Level 3 Advanced GCE in German
Pearson	60187062	Pearson Edexcel Level 3 Advanced GCE in Spanish
WJEC	50024784	WJEC level 3 Advanced GCE in Cymraeg Ail Iaith (Welsh second language)
WJEC	50024887	WJEC level 3 Advanced GCE in Spanish
WJEC	50024917	WJEC level 3 Advanced GCE in French
WJEC	50024929	WJEC level 3 Advanced GCE in German
WJEC	60300693	WJEC Eduqas Level 3 Advanced GCE in Spanish
WJEC	60300711	WJEC Eduqas Level 3 Advanced GCE in French
WJEC	6030070X	WJEC Eduqas Level 3 Advanced GCE in German



## Annex J: Level 3 Mathematics qualifications for the TechBacc in 2017

The qualification numbers for the level 3 mathematics qualifications for the TechBacc are listed in the table below.

Awarding Organisation	Qualification Number	Qualification Title
AQA	10034055	AQA level 3 Advanced Subsidiary GCE in Mathematics
AQA	10034080	AQA level 3 Advanced GCE in Mathematics
Pearson	10034110	Pearson Edexcel level 3 Advanced Subsidiary GCE in Mathematics
Pearson	10034122	Pearson Edexcel level 3 Advanced GCE in Mathematics
OCR	10034171	OCR Advanced Subsidiary GCE in Mathematics (MEI)
OCR	10034183	OCR Advanced GCE in Mathematics (MEI)
WJEC	10034237	WJEC Advanced Subsidiary GCE in Mathematics
WJEC	10034249	WJEC Advanced GCE in Mathematics
CCEA	10034298	CCEA Advanced Subsidiary GCE in Mathematics
CCEA	10034328	CCEA Advanced GCE in Mathematics
OCR	10034341	OCR Advanced Subsidiary GCE in Mathematics
OCR	10034353	OCR Advanced GCE in Mathematics
AQA	10060042	AQA level 3 Advanced Subsidiary GCE in Further Mathematics
AQA	10060054	AQA level 3 Advanced Subsidiary GCE in Pure Mathematics
AQA	10060066	AQA level 3 Advanced GCE in Pure Mathematics
AQA	10060078	AQA level 3 Advanced GCE in Further Mathematics
CCEA	1006008X	CCEA Advanced Subsidiary GCE in Further Mathematics
CCEA	10060091	CCEA Advanced Subsidiary GCE in Pure Mathematics
CCEA	10060108	CCEA Advanced GCE in Further Mathematics
CCEA	1006011X	CCEA Advanced GCE in Pure Mathematics
Pearson	10060121	Pearson Edexcel level 3 Advanced Subsidiary GCE in Further Mathematics
Pearson	10060133	Pearson Edexcel level 3 Advanced Subsidiary GCE in Pure Mathematics
Pearson	10060145	Pearson Edexcel level 3 Advanced GCE in Further Mathematics
Pearson	10060157	Pearson Edexcel level 3 Advanced GCE in Pure Mathematics
OCR	10060169	OCR Advanced Subsidiary GCE in Further Mathematics (MEI)
OCR	10060170	OCR Advanced Subsidiary GCE in Pure Mathematics (MEI)
OCR	10060182	OCR Advanced GCE in Further Mathematics (MEI)
OCR	10060194	OCR Advanced GCE in Pure Mathematics (MEI)
OCR	10060200	OCR Advanced Subsidiary GCE in Further Mathematics
OCR	10060212	OCR Advanced Subsidiary GCE in Pure Mathematics
OCR	10060224	OCR Advanced GCE in Further Mathematics
OCR	10060236	OCR Advanced GCE in Pure Mathematics
WJEC	10060248	WJEC Advanced Subsidiary GCE in Further Mathematics
WJEC	1006025X	WJEC Advanced Subsidiary GCE in Pure Mathematics
WJEC	10060261	WJEC Advanced GCE in Further Mathematics
WJEC	10060273	WJEC Advanced GCE in Pure Mathematics
IBO	50020638	IBO level 3 Certificate in HL Mathematics
IBO	50020651	IBO level 3 Certificate in SL Mathematics

<b>Awarding Organisation</b>	<b>Qualification Number</b>	<b>Qualification Title</b>
IBO	50020663	IBO level 3 Certificate in SL Further Mathematics
IBO	50020687	IBO level 3 Certificate in SL Mathematical Studies
OCR	50027359	OCR level 3 Advanced GCE in Further Mathematics (Pilot)
AQA	50027360	AQA level 3 Advanced GCE Further Mathematics (Pilot)
OCR	50027906	OCR level 3 Advanced GCE in Further Mathematics (Pilot)
OCR	50027918	OCR level 3 Advanced GCE in Mathematics (Pilot)
OCR	50029125	OCR level 3 Advanced Subsidiary GCE in Further Mathematics (Pilot)
OCR	50029137	OCR level 3 Advanced Subsidiary GCE in Mathematics (Pilot)
AQA	50031582	AQA level 3 Advanced Subsidiary GCE in Pure Mathematics (Pilot)
AQA	50031636	AQA level 3 Advanced GCE in Pure Mathematics (Pilot)
AQA	50032021	AQA level 3 Advanced Subsidiary GCE in Mathematics (Pilot)
AQA	50032033	AQA level 3 Advanced Subsidiary GCE in Further Mathematics (Pilot)
Cambridge	50037894	Cambridge International level 3 Pre-U Certificate in Mathematics (Principal)
Cambridge	50038291	Cambridge International level 3 Pre-U Certificate in Further Mathematics (Principal)
Cambridge	60007746	Cambridge International level 3 Pre-U Certificate in Mathematics (Statistics with Pure Mathematics): Short Course
Cambridge	60025682	Cambridge International level 3 Pre-U Certificate in Further Mathematics (Short Course)
IBO	6002575X	IBO level 3 Certificate in HL Mathematics
IBO	60025979	IBO level 3 Certificate in SL Mathematical Studies
IBO	60026017	IBO level 3 Certificate in SL Mathematics
IBO	60029912	IBO level 3 Certificate in Further Mathematics HL
C&G	60147088	City & Guilds level 3 Certificate in Using and Applying Mathematics
OCR	60147829	OCR level 3 Certificate in Quantitative Problem Solving (MEI)
OCR	60147830	OCR level 3 Certificate in Quantitative Reasoning (MEI)
WJEC	60148421	WJEC Eduqas level 3 Certificate in Mathematics for Work and Life
Pearson	60148573	Pearson Edexcel level 3 Certificate in Mathematics in Context
AQA	60149450	AQA level 3 Certificate in Mathematical Studies



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