
A basic guide to standard setting

Version 1.8

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Introduction

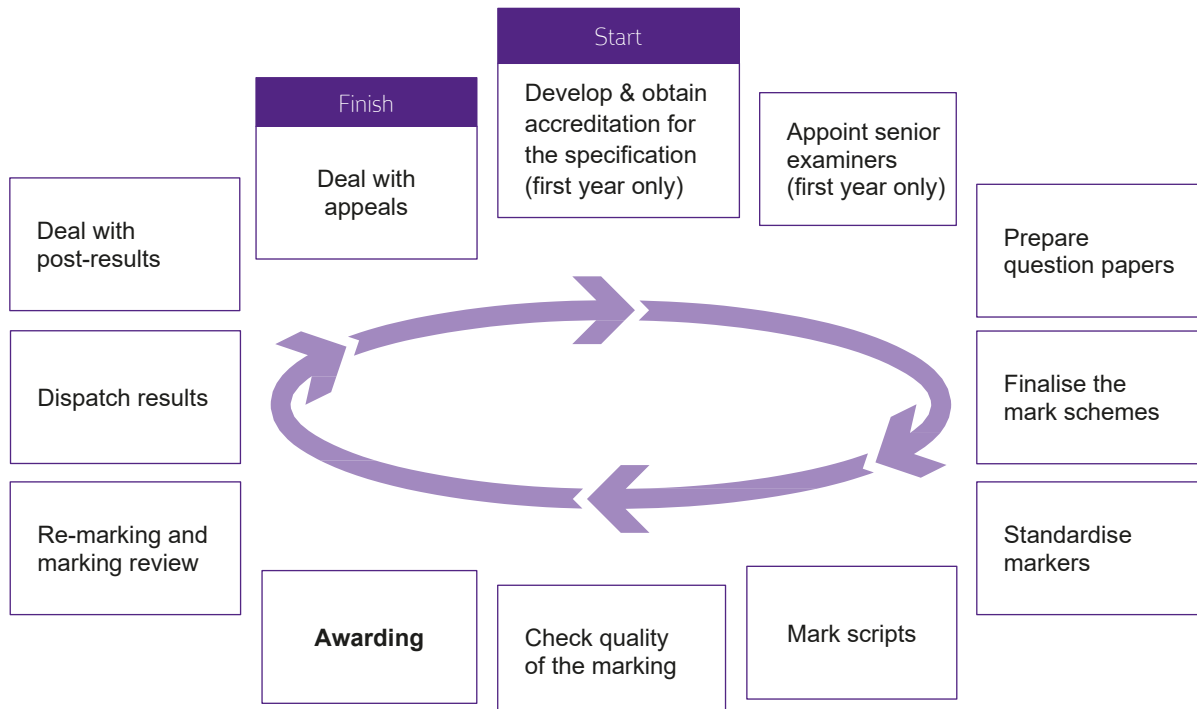
This leaflet is a guide to AQA's normal procedures for setting standards in all its qualifications. These procedures comply with those specified in the various GCE and GCSE qualification-level conditions and guidance documents issued by Ofqual (links to the documents can be found below)¹. These are generally referred to as the **standard-setting requirements** and are designed to promote quality, consistency, accuracy and fairness in assessment and standard setting. On occasion, alternative procedures, still within the standard-setting requirements, may be used, if necessary. The **data-exchange procedures** for each series (which are published on Ofqual's website) are also observed.

The standard-setting requirements and data-exchange procedures help to ensure that standards are maintained in each subject, across awarding organisations and different specifications from year to year and provide a basis for good practice in all aspects of the examining process. The process of standard setting is often referred to as awarding; it comprises determining the grade boundaries for an examination.

Where does awarding fit in the examination cycle?

Awarding is a crucial part of the examination process, which, once the qualification is established, begins with the setting of question papers and mark schemes and ends when the final results are produced. The examination process and all its inter-related procedures altogether take about two years to complete. An overview is given in Figure 1.

Figure 1: The examination process



¹ www.gov.uk/government/publications/gce-qualification-level-conditions-and-requirements;
www.gov.uk/government/publications/gce-qualification-level-guidance;
www.gov.uk/government/publications/gcse-9-to-1-qualification-level-conditions;
www.gov.uk/government/publications/gcse-9-to-1-qualification-level-guidance.

Why hold an awarding meeting?

In developing their question papers, examiners aim to produce papers of similar demand to those of previous years but, in practice, it is impossible to determine precisely the relative difficulty of the questions for the students until they have taken the examination. A paper may turn out to be slightly more difficult, or slightly easier, than those of previous years. Therefore, a candidate's script given a particular mark this year cannot necessarily be assumed to deserve the same grade as a candidate's script given the same mark last year; the demand of the paper may be different and/or the marking scheme may be more severe or more lenient. These, and further factors, must be taken into account before students' marks can be translated into grades.

Consequently, once the examination scripts have been marked, an awarding meeting is held for every specification to set grade boundaries on each question paper (or other external or internal assessment), otherwise known as **components**. The meeting may be held remotely or face-to-face, depending on the nature of the assessments being considered, but the essential process and procedures remain the same regardless.

The **boundary mark** for a given grade is the minimum mark a candidate must score on that paper, or subject, to obtain the grade in question². The primary aim when setting grade boundaries in established specifications is to maintain standards in the subject from the previous year and across awarding organisations by ensuring it is no harder or easier for a student to obtain a particular grade than in previous years. (This is called the **comparable outcomes** approach and is promoted by Ofqual.) In new specifications, the aim is to maintain the inter-awarding organisation standards of previous specifications in the subject, following the principle of comparable outcomes.

Who attends an awarding meeting?

Awarding committees are usually made up of between four and eight members, who together are responsible for assisting the Chair of the award in recommending appropriate grade boundary marks for the examination. The committee normally includes:

- **the Chair of the award (one for each award)** – responsible for maintaining standards across different specifications in a subject within a qualification, and from year to year
- **the Chief Examiner (one for each specification)** – responsible for ensuring that the examination, including both internal and external assessment, meets the requirements of the specification and maintains standards from year to year
- **the Lead (or Principal) Examiner (one for each externally assessed paper)** – responsible for maintaining standards within a question paper from year to year and for standardising the marking³
- **the Lead (or Principal) Moderator (one for each internally assessed paper)** – responsible for maintaining standards within an internal assessment from year to year. The Lead Moderator ensures that the assessment criteria are being applied to consistent standards
- **the Award Officer** – the internal officer responsible for overseeing the management of the meeting and the statistical data being used to guide the award.

Where necessary, the awarding committee may include other individuals with particular expertise in the subject concerned. In addition, non-participatory observers (for example, from Ofqual) sometimes attend the meeting.

² Note that in linear specifications, the grade boundaries are meaningful only at subject level; on the individual papers the grade boundaries are purely notional.

³ The Lead Assessment Writer is responsible for preparing the questions and mark schemes for one or more question papers but does not normally attend the award.

Which grades does the awarding committee consider?

The awarding committee does not look at work at every grade of each paper but scrutinises work and explicitly recommends grade boundaries for specific grades only. These are, consequently, called the **judgemental grades** in recognition of the fact that awarders' judgements are directly involved in the boundary setting. The judgemental grades for the papers differ according to the examination (see table below).

Examination	Judgemental grades (in scrutiny order)
AS; A-level; Level 3 Certificates	E, A
Linear GCSE (untiered)	Grade 4, Grade 7, Grade 1
Linear GCSE (tiered)	Grade 4, Grade 1 (Foundation / Core); Grade 4, Grade 7 (Higher / Extended) ⁴
Entry Level Certificate	Entry 2, Entry 3, Entry 1 ⁵
Applied General	Pass, Distinction
Foundation Project (Level 1)	B, A*
Higher Project (Level 2)	C, A*
Extended Project	E, A*

Any remaining grade boundaries are called **arithmetic boundaries** because they are determined by calculation, without any judgement involved. The arithmetic grades are either set evenly between the judgemental grades already proposed, or statistically (for example, GCSE grade 9 or A-level grade A*).

⁴ The judgemental boundaries for tiered linear GCSEs are taken in the order grade 4 (Foundation / Core), grade 4 (Higher / Extended), grade 7, grade 1.

⁵ In ELC Step Up to English (Silver), the judgemental boundaries are taken in the order Entry 1, Entry 2. In ELC Step Up to English (Gold), Entry 3 is the only judgemental boundary.

For example, in a linear A-level subject with a maximum raw mark of 240 for which the judgemental grade A and E boundaries have been set as 194 and 99 respectively, grades B, C and D would calculate to 170, 146 and 122. The difference between 194 and 99 is 95, which, divided by 4, is 23, with 3 remainders. A difference of 24 marks between the grades is therefore used as the basis but, working progressively from the top grade downwards, one remainder is included in the mark calculation each time until they are used up, thus:

- 194 has already been established judgementally as the mark to be recommended for grade A
- $194 - 24$ (ie 23, plus one of the remainders) = 170 = grade B
- $170 - 24$ (ie 23, plus the second remainder) = 146 = grade C
- $146 - 24$ (ie 23, plus the third remainder) = 122 = grade D
- $122 - 23$ then correctly calculates to 99, the mark already established judgementally for grade E.⁶

A similar approach is used to calculate the arithmetic boundaries on all other examinations⁶.

To calculate the A* conversion point for an A level unit in a unitised A-level specification, the approach is as follows:

- where the difference between the grade A boundary mark and the maximum mark on the unit is more than twice that between A and B, the A* conversion point is normally the same distance above A as B is below A
- where the difference between the grade A boundary mark and the maximum mark on the unit is less than or equal to twice that between A and B, the A* conversion point is normally halfway between A and the maximum raw mark. This is rounded down, where necessary, to the nearest whole number below (eg 78.5 is rounded to 78).

In the example above, the A* conversion point for the A level unit would be calculated by the second approach, because the difference between A and the maximum mark for the unit is $90 - 77 = 13$ marks, which is less than twice the difference between A and B ($2 \times (77 - 66) = 22$). The A* conversion point is therefore $77 + (13 \div 2) = 83.5$, which is rounded down to 83.

Please see later in this document for more information about the setting of grade A* in linear A-levels and grade 9 in linear GCSEs.

⁶ Again note that in linear specifications, the grade boundaries are meaningful only at subject level; on the individual papers, the grade boundaries are purely notional.

What information is available to the awarding committee to guide its recommendations?

Before the meeting, the awarding committee members are sent various materials to help them prepare, including:

- question papers and mark schemes from last year and this year
- students' work at the judgemental grade boundaries for last year (where appropriate).

Within the meeting, the awarding committee's grade boundary recommendations are based on:

- the members' professional judgement of how the quality of the current students' work seen in this year's scripts (or other internal or external assessment) compares with that of previous students in last year's scripts, taking into account any change in the demand of the question paper
- the available statistical data, showing how the marks awarded in the current examination compare with those awarded in previous years.

Both forms of evidence are used to balance the decision-making process and ensure that the committee members are fully aware of the implications of each recommendation. Before considering each grade boundary, the committee reviews the information available to help it understand how the examination has operated in practice, including:

- reports from the Lead Examiner or Lead Moderator on how the question paper (or other internal or external assessment) functioned this year.
- statistical information relevant to the examination and/or to each paper, which will normally include:
 - the mark allocations for each paper and any scaling factors applied to achieve the weightings set out in the specification
 - details of how many students obtained each mark (that is the mark distribution)
 - statistical predictive modelling taking into account the ability of students this year compared to previous years to ensure that, having accounted for ability, the comparable outcomes approach is upheld, ie that the proportions of students being awarded each judgemental grade are maintained
 - statistical recommendations for each component of the specification at the judgemental grade boundary marks.

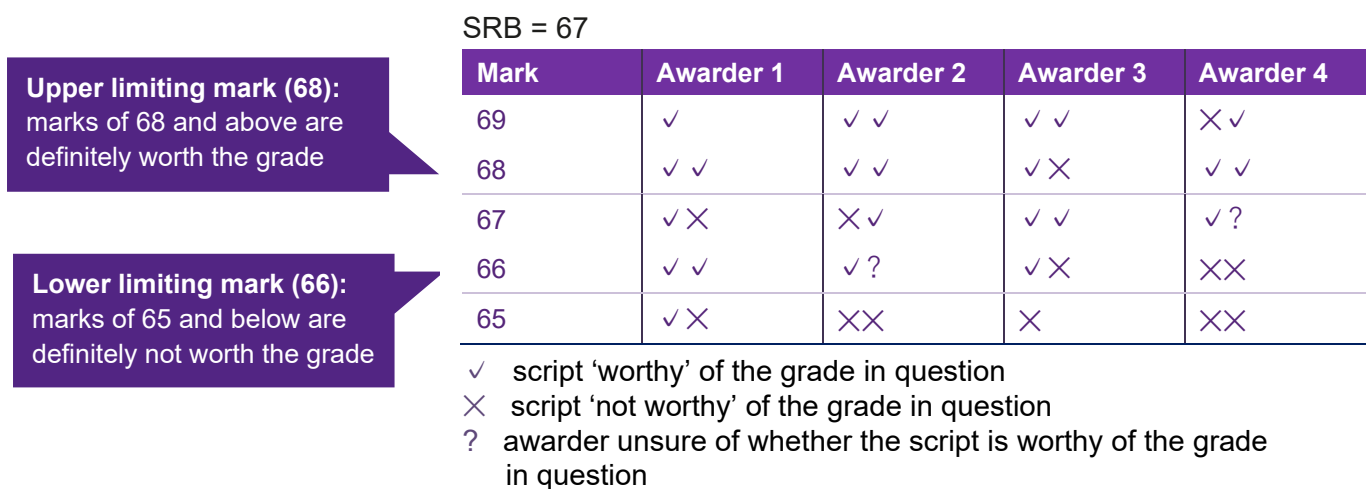
Other statistical and reference information may be used in addition, or alternatively, if there is sufficient evidence that it would enhance the decision making in the award.

How does the awarding committee recommend each grade boundary mark?

On each judgemental grade boundary, each committee member independently scrutinises scripts in a mark range covering the grade boundary mark suggested by the statistical evidence (the **statistically recommended boundary** or SRB) and records whether he/she considers it worthy of the grade. They cover the range provided between them so do not all look at the same scripts and each member is encouraged to come to his/her own recommendation about each script he/she has seen. Scripts on the grade boundary from last year are also referred to, as appropriate, during the scrutiny.

A **tick chart** is then used to summarise the committee’s recommendations overall. The committee determines two **limiting marks** defining the upper and lower extremes of the range within which they consider the grade boundary to lie (here, the upper limiting mark is 68 and the lower limiting mark is 66, so the range is 66-68; see Figure 2). The Chair then selects a recommended boundary mark, within the limiting range, taking both the committee’s judgement and the statistical evidence into account⁷. The limiting range can also be referred to as the **zone of uncertainty**. As shown in Figure 2, the SRB is noted on the tick chart, for the committee’s ease of reference during the grade boundary discussions.

Figure 2: Example tick chart for a judgemental grade boundary of a particular paper



What happens then?

Once grade boundary recommendations are made on all the individual papers, they are combined to establish the outcomes for the subject as a whole. In modular specifications, this process requires the use of uniform marks (see below). In linear specifications, the component boundaries for each paper are scaled and summed to establish each candidate’s mark for the overall subject. The scaling takes account of the weightings of the components.

In all specifications, the subject outcomes are then reviewed by the committee. In an established specification with large numbers of students taking the examination, the percentage of students obtaining each grade is not expected to change much from year to year. If the award outcomes meet expectations, the Chair authorizes the awarding meeting outcomes in a short, written report. Otherwise, the Chair must justify his/her recommendations in a detailed report.

⁷ In the first and second awards of a reformed specification, for various reasons (for example, the change to the specification structure), the statistical evidence provides the best indication of where the subject boundaries should be positioned. Therefore, in the initial awarding series, the awarding committee will not normally move away from the SRB within the zone of uncertainty.

Who decides whether the committee's recommendations are right?

All the grade boundary recommendations and the resulting outcomes are recorded and combined with the reports from the meeting. One of the Standards & Awarding managers then considers the outcomes for provisional approval, where necessary liaising with the Award Officer and Chair with any queries. The documents are then passed to the AQA Responsible Officer, who considers and comments on every award, with reference to any comments from the provisional approver, the Chair's documented comments and the statistical and technical evidence. Final approval for the award rests with the AQA Responsible Officer.

The use of uniform marks in unitised specifications

In modular specifications, after the grade boundaries for each unit⁸ have been agreed, the students' raw marks⁹ are converted into uniform marks. The conversion uses the grade boundaries set at the awarding meeting and is carried out according to a standard procedure agreed between the awarding organisations and the regulators. Although a given raw mark may not represent the same level of achievement in different exam series, a given uniform mark always represents the same level of achievement and can be directly related to a grade.

The uniform mark for a unit also takes account of the weighting of the unit within the specification. If one unit has twice the weighting of another, the maximum uniform mark available for the first unit will be twice that available for the second.

The relationship between uniform marks and grades (for each unit and for the qualification overall) is shown in tables which are made available on the AQA website. A converter will also be made available, when appropriate, to calculate uniform marks from raw marks.

To determine a candidate's qualification grade, the candidate's uniform marks for the units in the specification are added together. The total uniform mark is then converted to a grade using the equivalences shown in the tables.

Uniform marks and grades are reported for each unit, as well as for the overall qualification.

Grade A* and grade 9

To be awarded A* in unitised A-levels, students must achieve grade A on the A-level overall and at least 90% of the maximum uniform mark on the aggregate of the A level units.

In linear A-levels, the A* subject boundary is set statistically in the first year to ensure that standards at this grade are maintained from the unitised A-level specifications and remain comparable across awarding organisations. In subsequent years, the A* subject boundary is set statistically to ensure that standards at this grade are maintained from previous years.

In linear GCSEs, the grade 9 boundary is set in the first year according to a statistical formula which ensures that, across all subjects, about 20% of grades at 7 or above will be a grade 9. In subsequent years, the grade 9 boundary is set statistically to ensure that standards at this grade are maintained from the previous year.

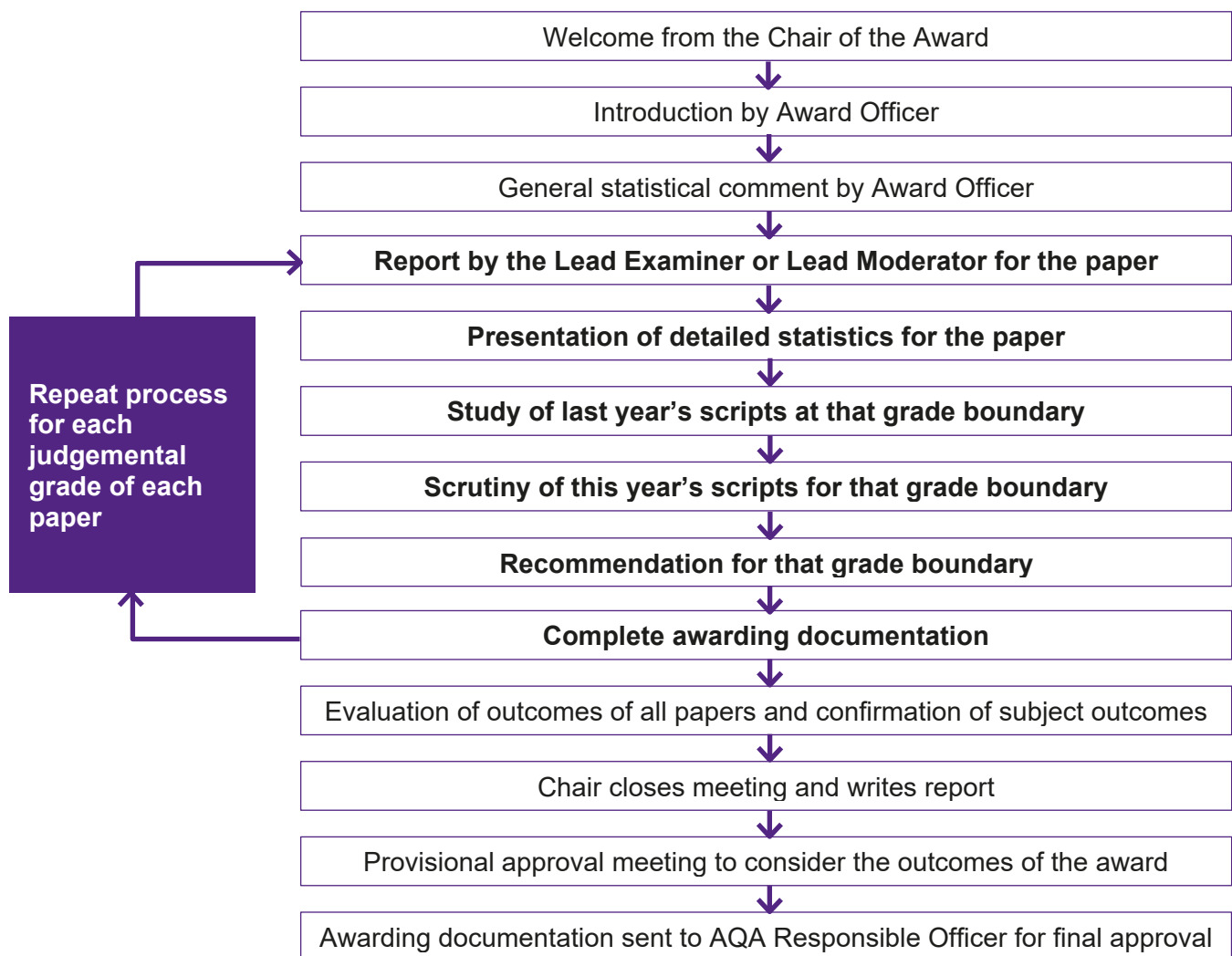
⁸ ie for each question paper and/or other internally or externally assessed task.

⁹ The marks awarded by the examiners for the external units and the moderated marks for any internal units.

Overall, how does the process fit together?

Figure 3 summarises the steps normally followed in an awarding meeting¹⁰. The central aspects of the process that are repeated for each paper and judgemental boundary are highlighted in bold.

Figure 3: Overview of the process followed in an awarding meeting



¹⁰ In the first award for a reformed specification, studying scripts at the last year's grade boundary is not appropriate.

Glossary

Arithmetic grade boundary	A grade boundary for a paper that is determined by calculation, based on the judgemental boundaries that have already been established for that paper.
Awarding	The process of translating the marks that students have been given into grades.
Awarding committee	The group of people, comprising senior examiners and awarding organisation staff, who are collectively responsible for recommending the grade boundaries for an examination.
Award meeting	The meeting at which grade boundaries are determined for an examination. For an established specification, the aim of the meeting is to place this year's boundaries on marks that produce outcomes comparable to those of previous series.
Award officer	The AQA officer who oversees the running of the award. The Award Officer does not scrutinise scripts in the awarding meeting but is still a full member of the awarding committee, advising the awarding meeting and directing its procedures.
Comparable outcomes	The approach to awarding promoted by Ofqual. It statistically maintains subject standards both between years and between awarding organisations by ensuring that a student achieving a certain grade in a subject in the current year could expect to have achieved the same grade in previous years.
Component	A discrete assessable element within a qualification for which the results are not formally reported.
External assessment/unit	A form of assessment in which question papers, assignments and tasks are set by the awarding organisation, taken under specified conditions (including details of supervision and duration) and marked by the awarding organisation.
Grade boundary	The minimum mark required to achieve a particular grade on a paper or in a subject.
Judgemental grade boundary	A grade boundary for a paper that is determined directly by script scrutiny and discussion of all the evidence available, both qualitative and quantitative.
Lower limiting mark	The lowest mark in the awarding committee's zone of uncertainty for a particular grade. Any marks below this are not considered worthy of the grade in question (see Figure 2).

Non-exam assessment (NEA)	A term used in reformed specifications to denote a form of internal or external assessment in which full exam conditions do not apply. The subject-level conditions will specify the controls that will apply to how tasks are set, the conditions under which they will be done and how they will be assessed.
Regulatory authorities	The three key partners overseeing the maintenance of consistent standards across awarding organisations in England, Wales and Northern Ireland, respectively the Office of Qualifications and Examinations Regulation (Ofqual), Qualifications Wales and the regulatory arm of the Council for the Curriculum, Examinations and Assessment (CCEA).
Responsible Officer	The person in each awarding organisation who is ultimately responsible for the standards of all examinations offered by that awarding organisation, as required by Ofqual.
SRB	The statistically recommended boundary for a judgemental grade. This is based on the best quantitative evidence available for the paper under discussion and calculated as the mark that maintains standards from last year as closely as possible.
Tick chart	Essentially a grid, which is completed for each judgemental grade boundary. It shows each awarding committee member's decisions as to whether each of the scripts he/she scrutinised was, or was not, worthy of the grade in question. Once completed, this grid depicts the view of the awarding committee as a whole (see Figure 2).
Unit	The smallest part of a non-linear qualification for which the results are formally reported. In rare instances, a unit may comprise two separately assessed components.
Upper limiting mark	The top mark of the awarding committee's zone of uncertainty for a particular grade. Scripts at this mark and above are considered definitely worthy of the grade in question (see Figure 2).
Zone of uncertainty	The limited range of marks within which the awarding committee's judgements indicate that the grade boundary should lie. By definition, within this range, the committee as a whole is uncertain about exactly where the grade boundary should be situated.

