

## SHORT UPDATE

# A level Mathematics (England) grade distributions and grade boundaries 2019-2023

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## Abstract

This article sets in context the A level Mathematics qualifications (in England) awarded in Summer 2023 with those awarded in 2019-2022, along with year-on-year overall comparisons of grade profiles, and year-on-year comparisons of grade boundaries and grade profiles for each of the four A level Specifications: Pearson/Edexcel, AQA, OCR A and OCR B (MEI).

**Keywords:** AS/A level qualifications; mathematics, grade profiles, grade boundaries, 2019-2023.

## 1. Introduction

A levels in Mathematics have been awarded since 1951, and underwent a major reform in England in 2017 (see Department for Education, 2016) which were first examined in 2018, although the 2019 examinations were the first ones sat by a cohort after two years' of A level study.

In 2020 & 2021 A levels in England were awarded on a different basis from previous years following the cancellation of national examinations because of the disruption to schools and colleges due to Covid.

## 2. 2019-2023 policy

The background policies and implementation to the awards in England in 2019-2023 can be summarised as follows:

- **Summer 2019:** National examinations were held. Grades were awarded as in previous years - primarily on a statistical basis to ensure comparable outcomes with candidates in previous years.
- **Summer 2020:** Centre Assessed Grades (CAGs) – students did not sit national examinations (unlike in 2019 and previously). They were awarded Centre Assessed Grades – schools/colleges were asked to submit a Centre Assessed Grade for their students which were expected to be a realistic judgement of the grade each student would have been most likely to get if they had taken their examinations in each subject.
- **Summer 2021:** Teacher Assessed Grades (TAGs) – students did not sit national examinations (unlike in 2019 and previously). Instead of using the same approach as in 2020 using CAGs, students were instead awarded Teacher Assessed Grades – schools/colleges were asked to submit a Teacher Assessed Grade for their students which were expected to represent the student's performance in the subject content they had been taught, representing a subtle but important difference from CAGs.
- **Summer 2022:** National Examinations were held. The Office of Qualifications and Examinations Regulator for qualifications, examinations and assessments in England (Ofqual) set out their intentions in September 2021 for Summer 2022 awards (Ofqual, 2021):

*“Our aim is to return to a pre-pandemic grade profile.”*

*“In 2022 we will aim, therefore, to reflect a midway point between 2021 and 2019. **In 2023 we aim to return to results that are in line with those in pre-pandemic years.**”*

and Dr Jo Saxton, Chief Regulator at Ofqual, confirmed on the publication of A level results on 18 August 2022 (Ofqual, 2022):

*“Today’s results are higher than those of 2019, and – as we have always said – lower than in 2021, when there was a different method of assessment. It makes sense to compare this year’s results with those of 2019 when exams were last sat. I felt strongly that it would not have been right to go straight back to pre-pandemic grading in one go but accept that we do need to continue to take steps back to normality. These results overall, coming as they do broadly midway between 2021 and 2019, represent a staging post on that journey.”*

- **Summer 2023:** National Examinations were held. Dr Jo Saxton, Chief Regulator at Ofqual, confirmed on the publication of A level results on 17 August 2023 (Ofqual, 2023):

*“Two years ago we set out a clear plan to return to pre-pandemic grading – a system that schools, colleges, universities and employers are all familiar with. As we said then, we expected overall A level results would be similar to 2019, and lower than in 2022. However, recognising the disruption that students have experienced, we put in place important grading protection to make sure that a student who would have secured a particular grade in 2019, would be just as likely to achieve that same grade this year. It is therefore more meaningful to compare this year’s results with those of 2019, the last summer exam series before the pandemic.*

*“There has been a return to pre-pandemic grading this summer in England with protection in place for students. It is most meaningful to compare results to 2019, the last summer exam series before the pandemic.*

*“Overall A level results in England are similar to 2019. Outcomes at grade A and above are 26.5% compared with 25.2% in 2019, and outcomes at grade B and above are 52.7% compared with 51.1% in 2019.”*

### 3. Entry numbers

Figure 1 shows the entry numbers for each of the A level Specifications: Pearson/Edexcel, AQA, OCR A and OCR B (MEI), (Pearson, 2023a), (AQA, 2023a), (OCR, 2023a).

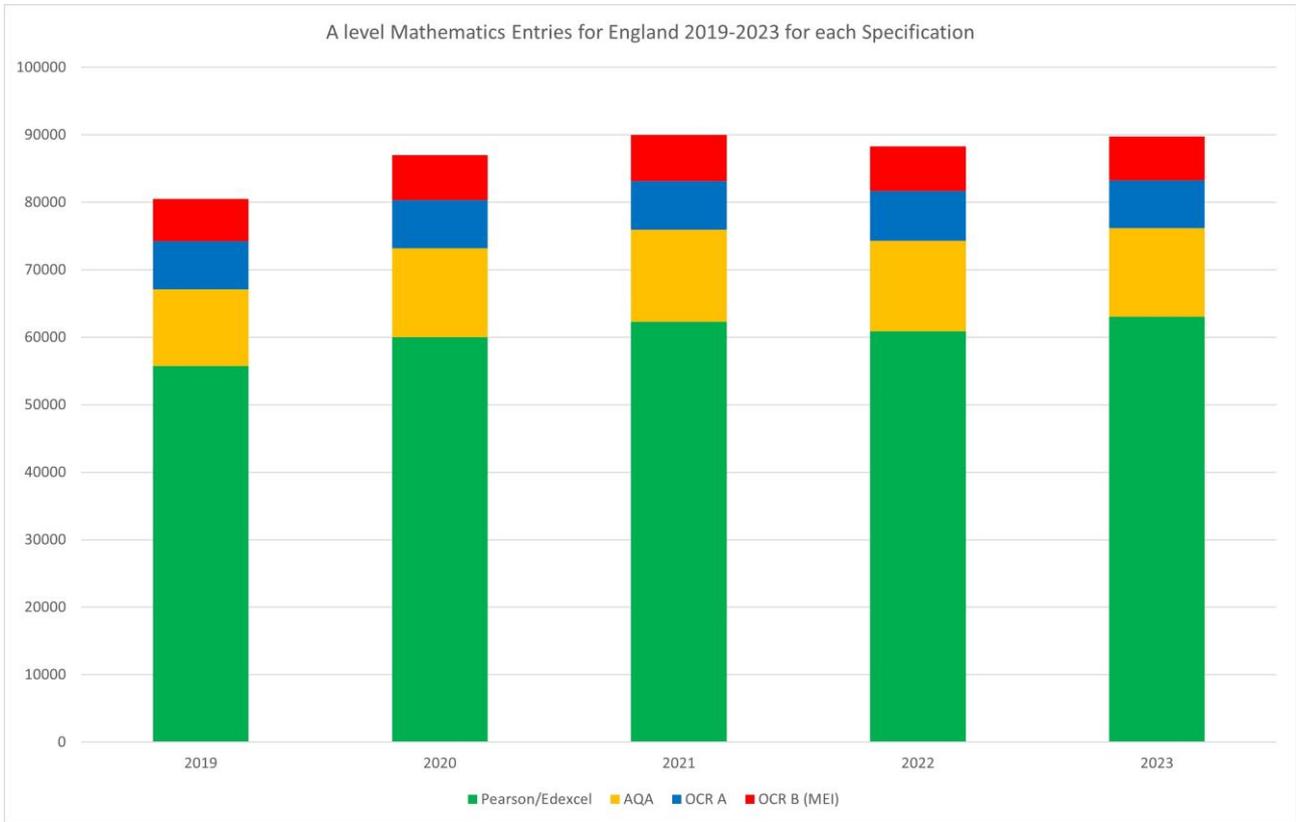


Figure 1. A level Mathematics Entries for England: 2019, 2022, 2023 (examinations), 2020 (CAGs), 2021 (TAGs) for each Specification.

## 4. Grade distributions

### 4.1. Overall national data

Figure 2 shows the grade distribution for National Examination results for A level Mathematics in England in Summer 2023 compared with the National Examination results in 2019 and 2022 and those from TAGs in 2021 and CAGs in 2020 (JCQ, 2023).

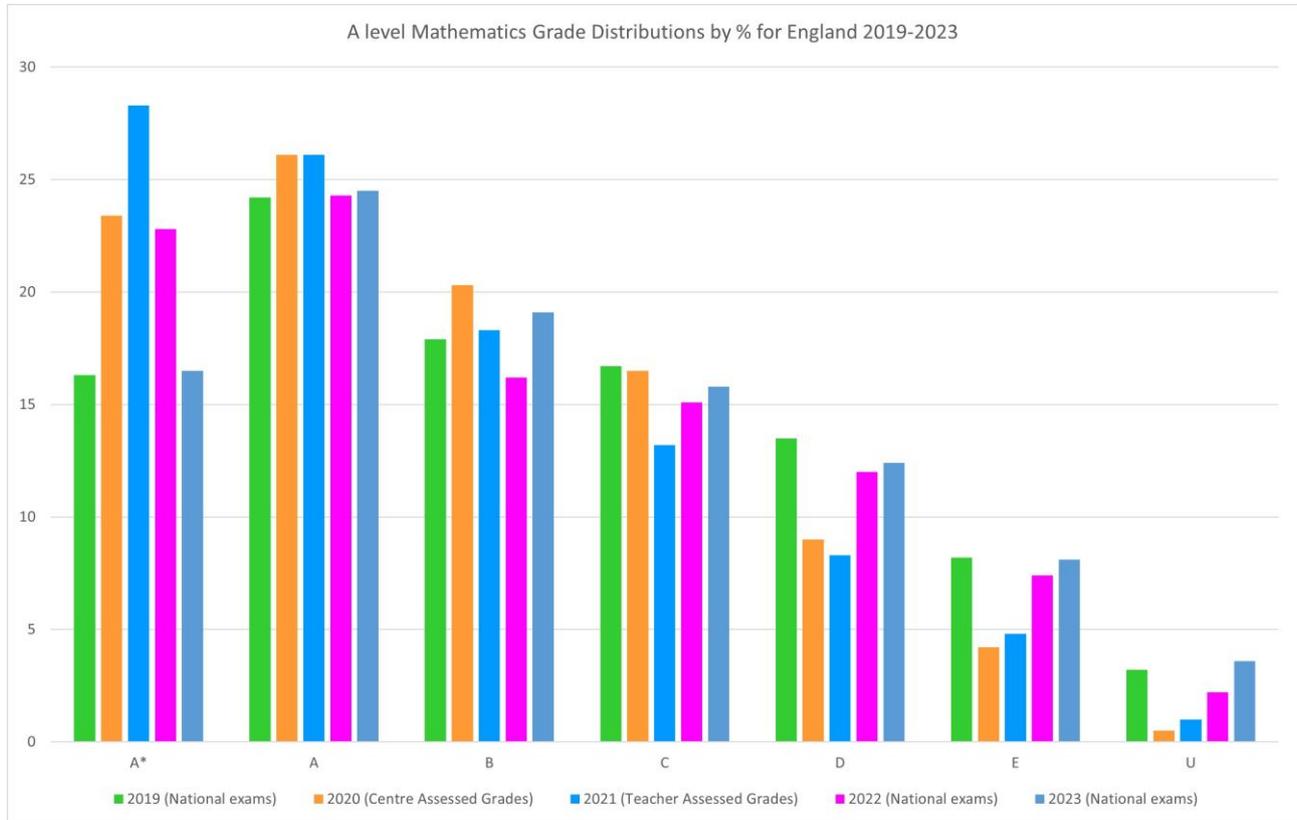


Figure 2. A level Mathematics Grade Distributions by % for England: 2019 (examinations), 2020 (CAGs), 2021 (TAGs), 2022, 2023 (examinations).

#### 4.2. Data by year

Figures 3a, 3b and 3c show the grade distribution for the reformed Specifications: Pearson/Edexcel, AQA, OCR A and OCR B (MEI) as stacked column charts for each of the National Examination results for A level Mathematics in Summer 2019, 2022 and 2023, respectively, (Pearson, 2023a), (AQA, 2023a), (OCR, 2023a).

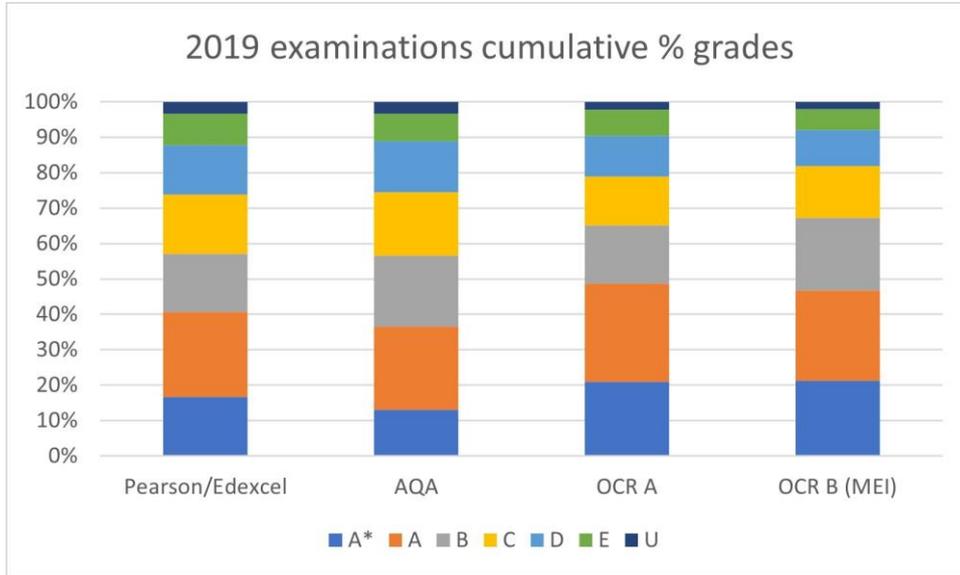


Figure 3a. A level Mathematics Grade Distributions by % for England 2019 for each Specification.

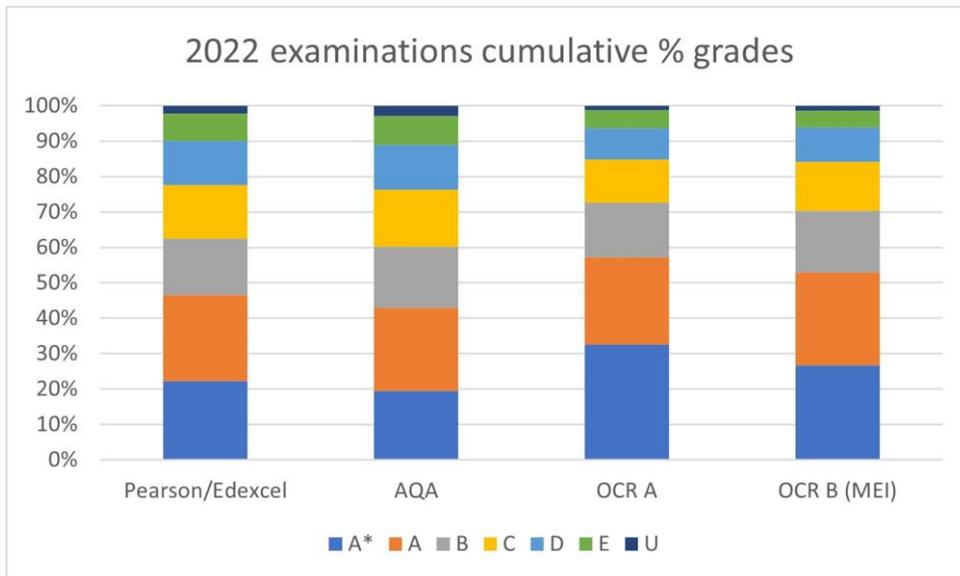


Figure 3b. A level Mathematics Grade Distributions by % for England 2022 for each Specification.

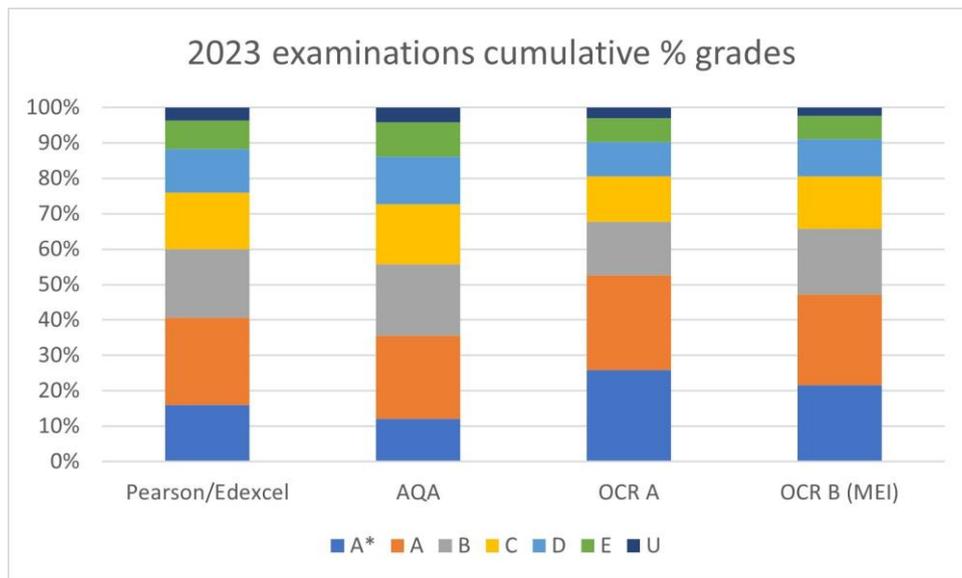


Figure 3c. A level Mathematics Grade Distributions by % for England 2023 for each Specification.

#### 4.3. Data by specification

Figures 4a, 4b, 4c and 4d show the grade distribution for each the reformed Specifications: Pearson/Edexcel, AQA, OCR A and OCR B (MEI), respectively, as stacked column charts for each of the National Examination results for A level Mathematics in Summer 2019, 2022 and 2023, (Pearson, 2023a), (AQA, 2023a), (OCR, 2023a).

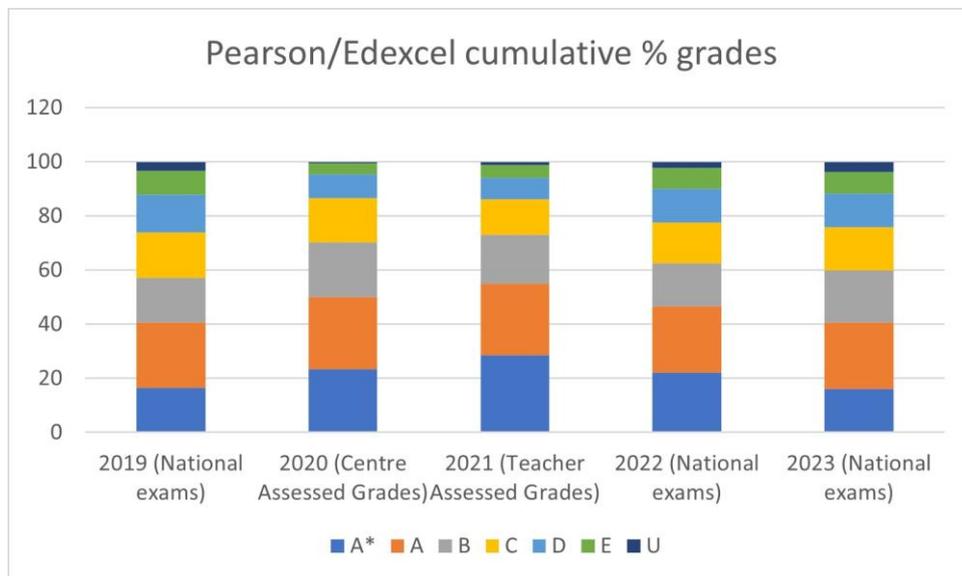


Figure 4a. A level Mathematics Grade Distributions by % for England 2019-2023 for Pearson/Edexcel.

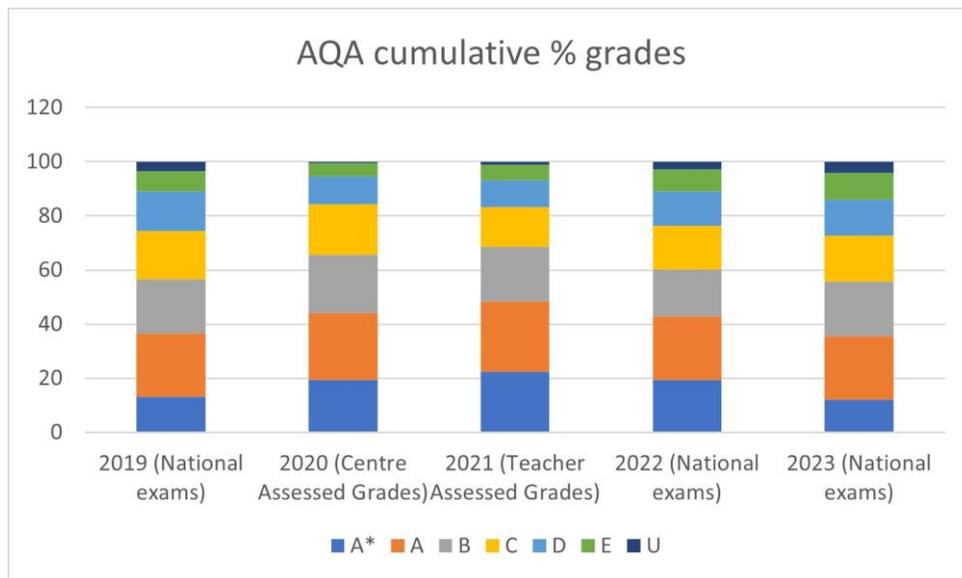


Figure 4b. A level Mathematics Grade Distributions by % for England 2019-2023 for AQA.

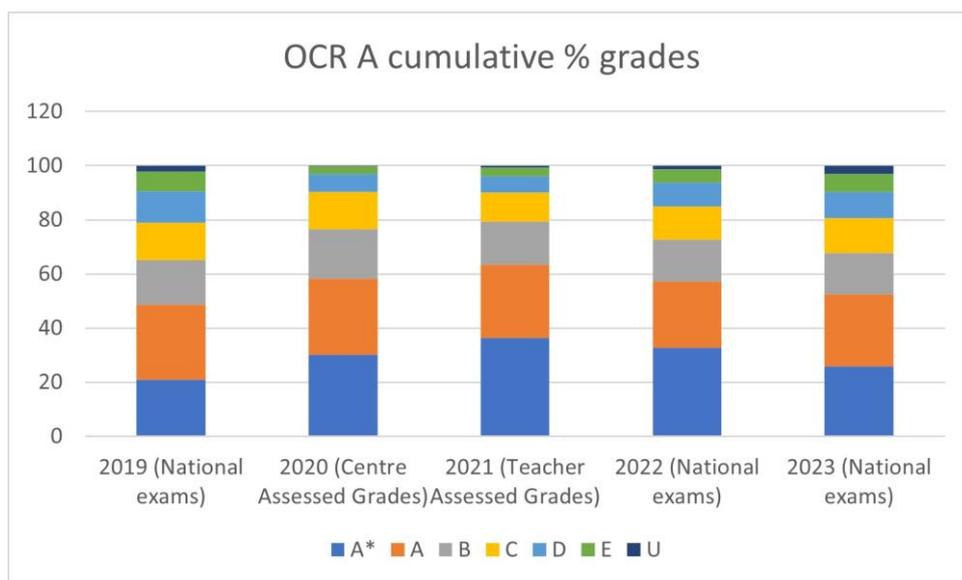


Figure 4c. A level Mathematics Grade Distributions by % for England 2019-2023 for OCR A.

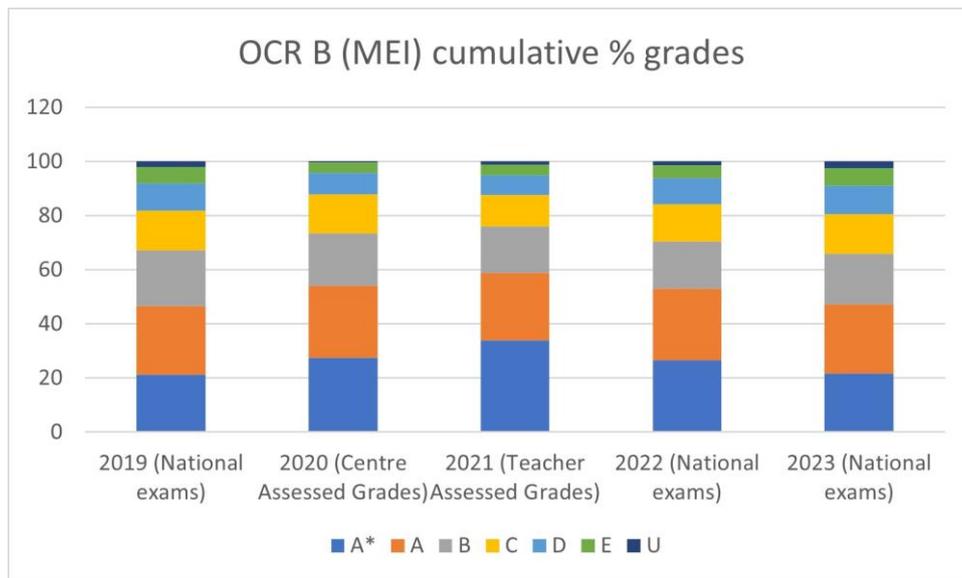


Figure 4d. A level Mathematics Grade Distributions by % for England 2019-2023 for OCR B (MEI).

(See Figures 5 and 6 in Glaister (2023) for all grade distributions shown on the same graph - ordered by Specification and by Year, respectively - for the National Examination results for A level Mathematics in Summer 2023, compared with those from TAGs in 2021, CAGs in 2020, and the National Examination results in 2019 and 2022, for the reformed Specifications: Pearson/Edexcel, AQA, OCR A and OCR B (MEI).)

#### 4.4. Overall national data by Specification and by Year for grades A\*, A and B

Grades A\*, A and B are typical grade requirements for A level Mathematics for students applying for entry to degree programmes in mathematical sciences.

Figures 5a and 5b show the detailed profiles for grade A\* only - ordered by Year and by Specification, respectively; the corresponding detailed profiles for grade A only are shown in Figures 6a and 6b, while Figures 7a and 7b show the corresponding detailed profiles for grade B only, (Pearson, 2023a), (AQA, 2023a), (OCR, 2023a).

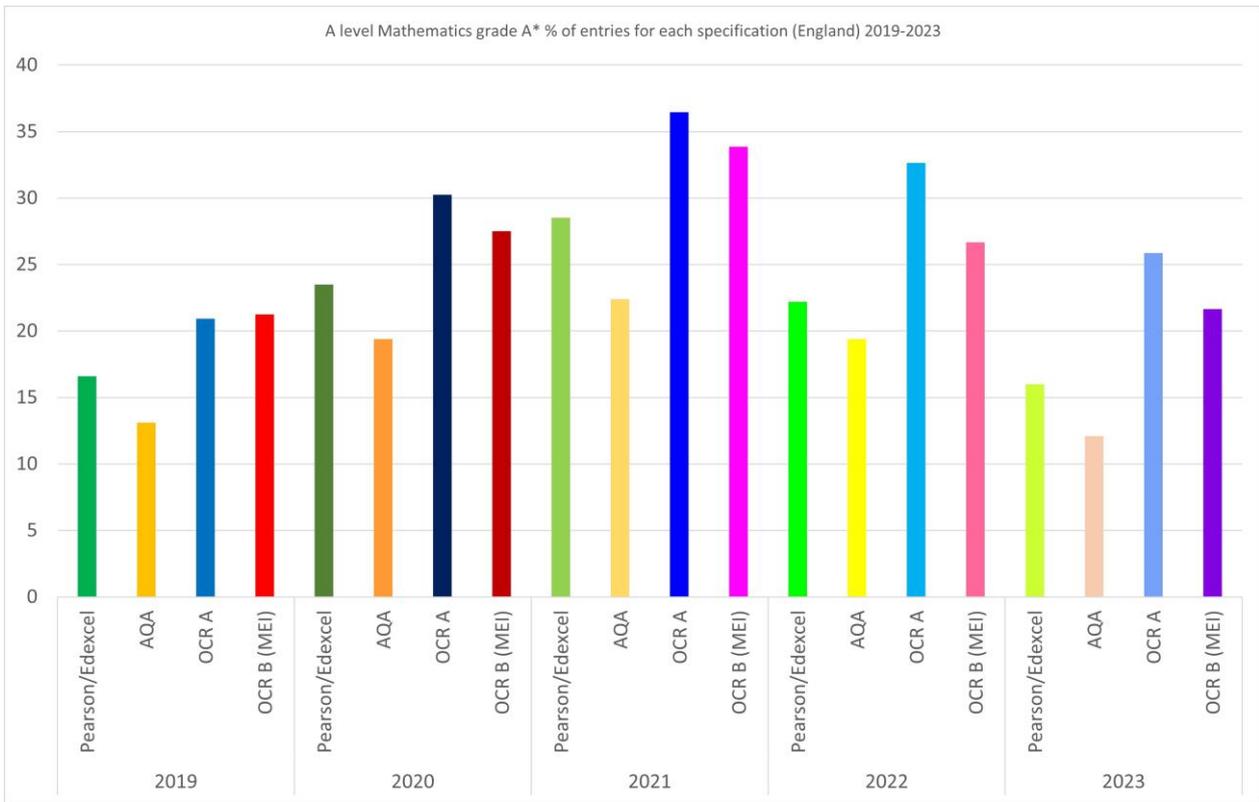


Figure 5a. A level Mathematics Grade A\* Profiles by % for England 2019-2023 for each Specification.

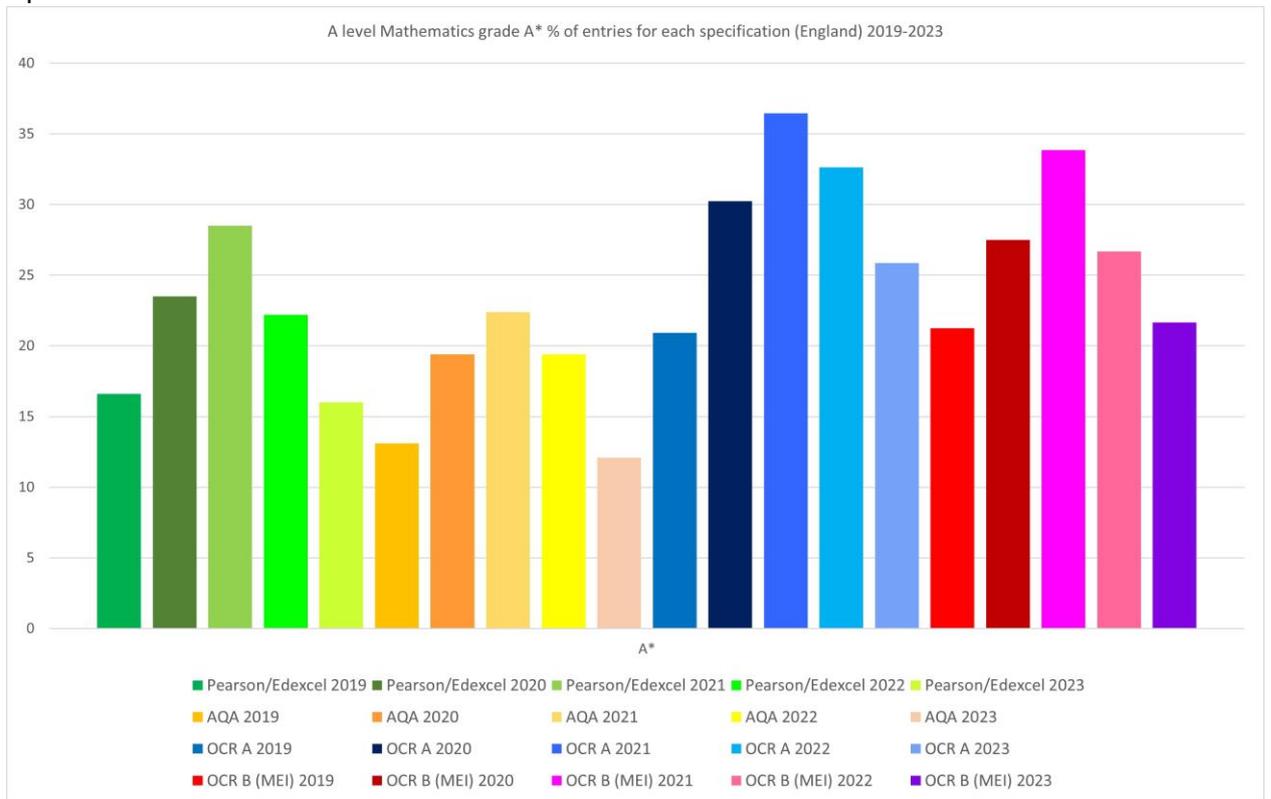


Figure 5b. A level Mathematics Grade A\* Profiles by % for each Specification for England 2019-2023.

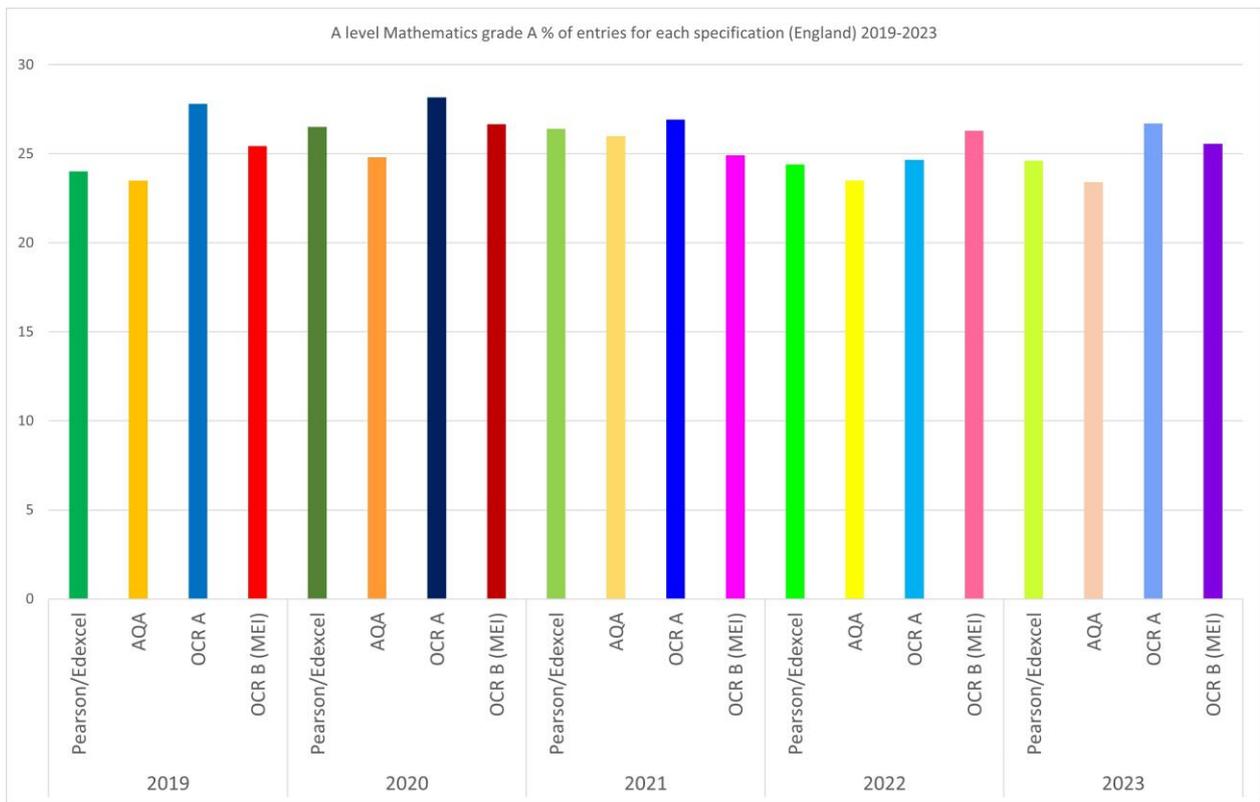


Figure 6a. A level Mathematics Grade A Profiles by % for England 2019-2023 for each Specification.

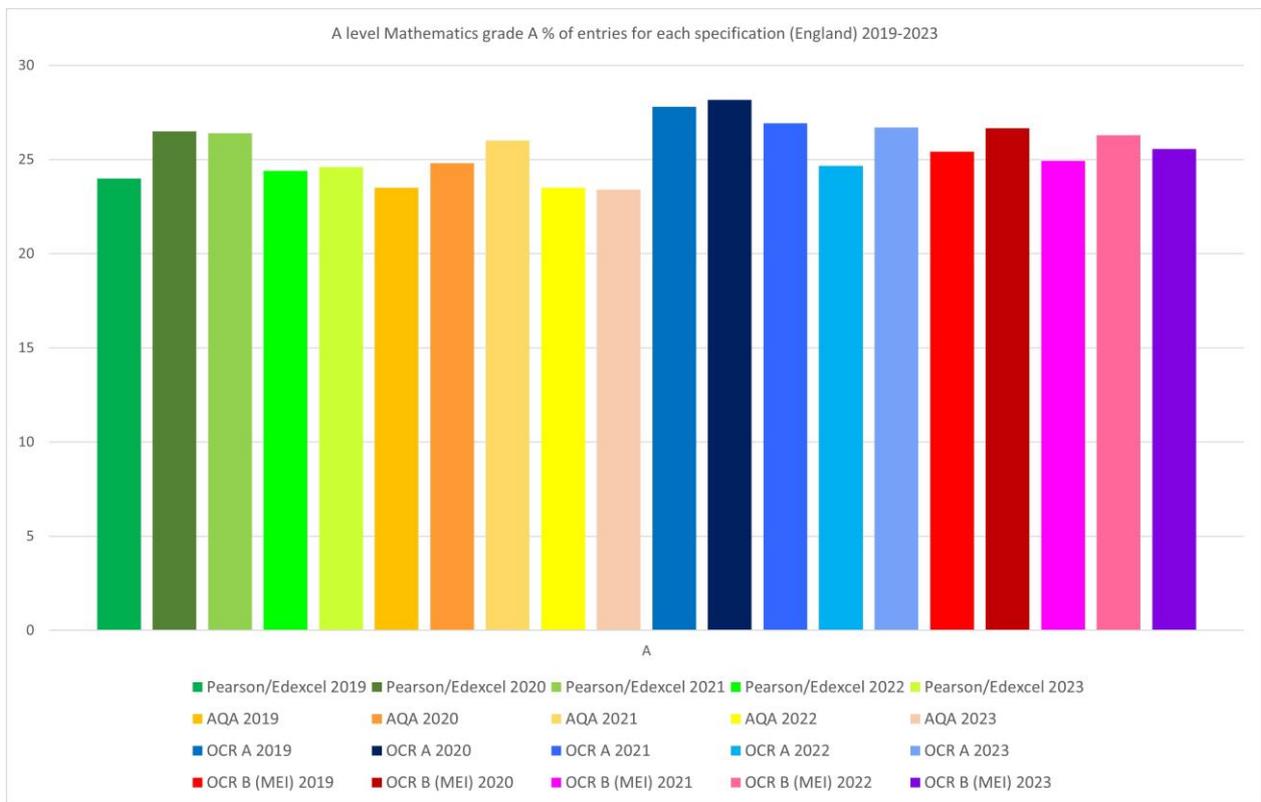


Figure 6b. A level Mathematics Grade A Profiles by % for each Specification for England 2019-2023.

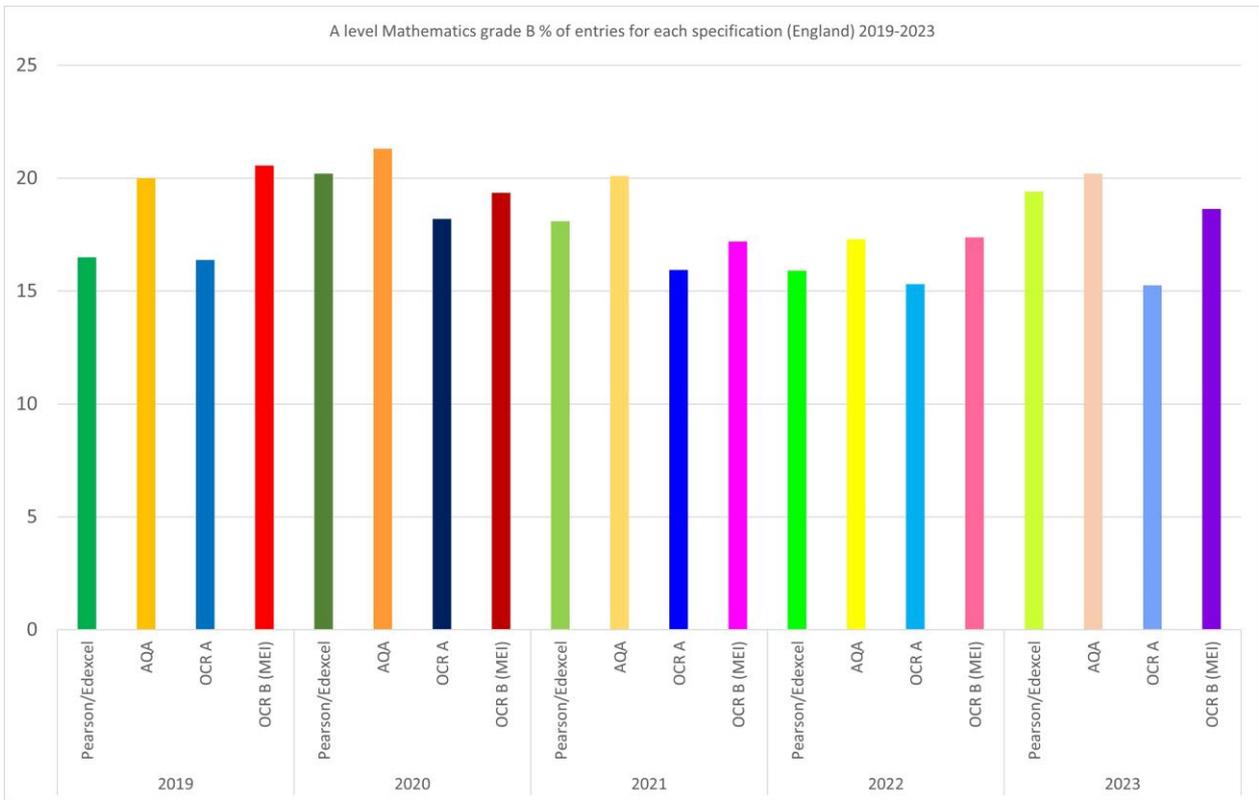


Figure 7a. A level Mathematics Grade B Profiles by % for England 2019-2023 for each Specification.

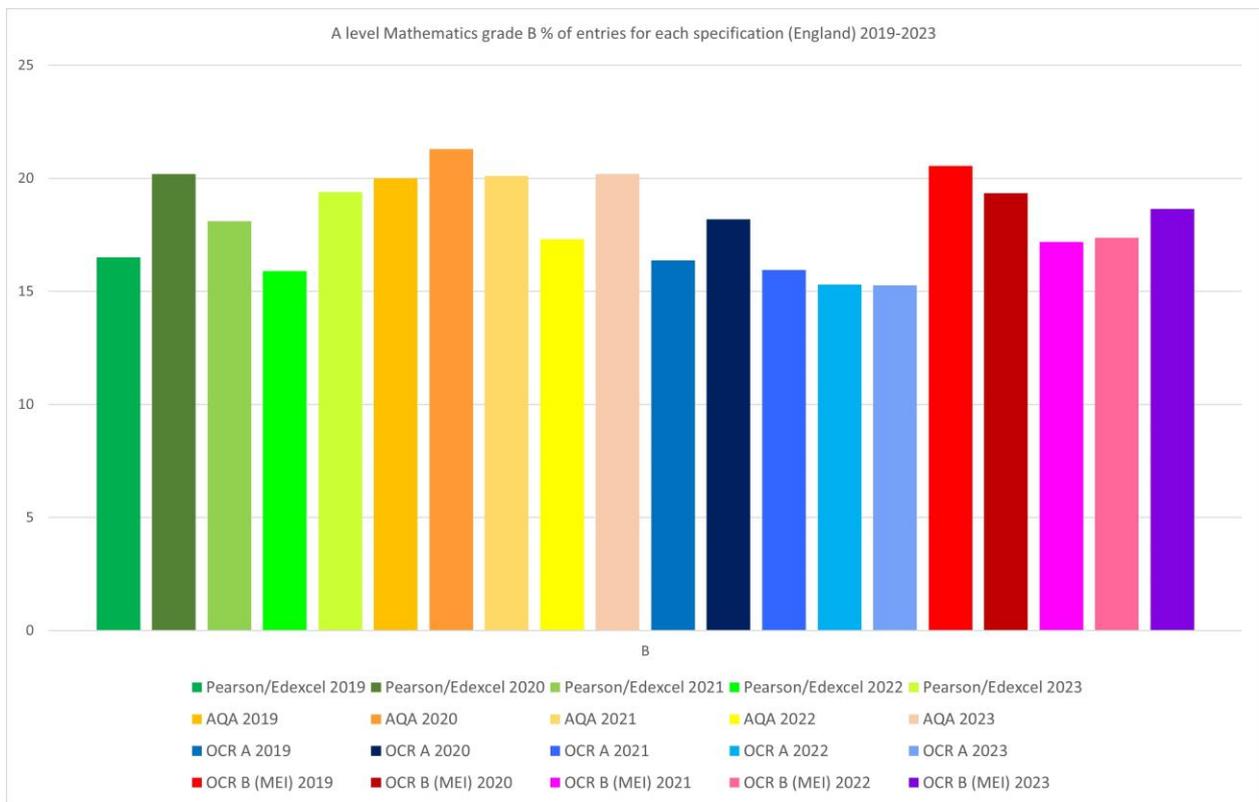


Figure 7b. A level Mathematics Grade B Profiles by % for each Specification for England 2019-2023.

## 5. Grade boundaries

Figures 8a, 8b and 8c show the A level Mathematics grade boundaries as % for each of 2019, 2022 and 2023 National Examinations, respectively, for each Specification, (Pearson, 2023b), (AQA, 2023b), (OCRb, 2023).

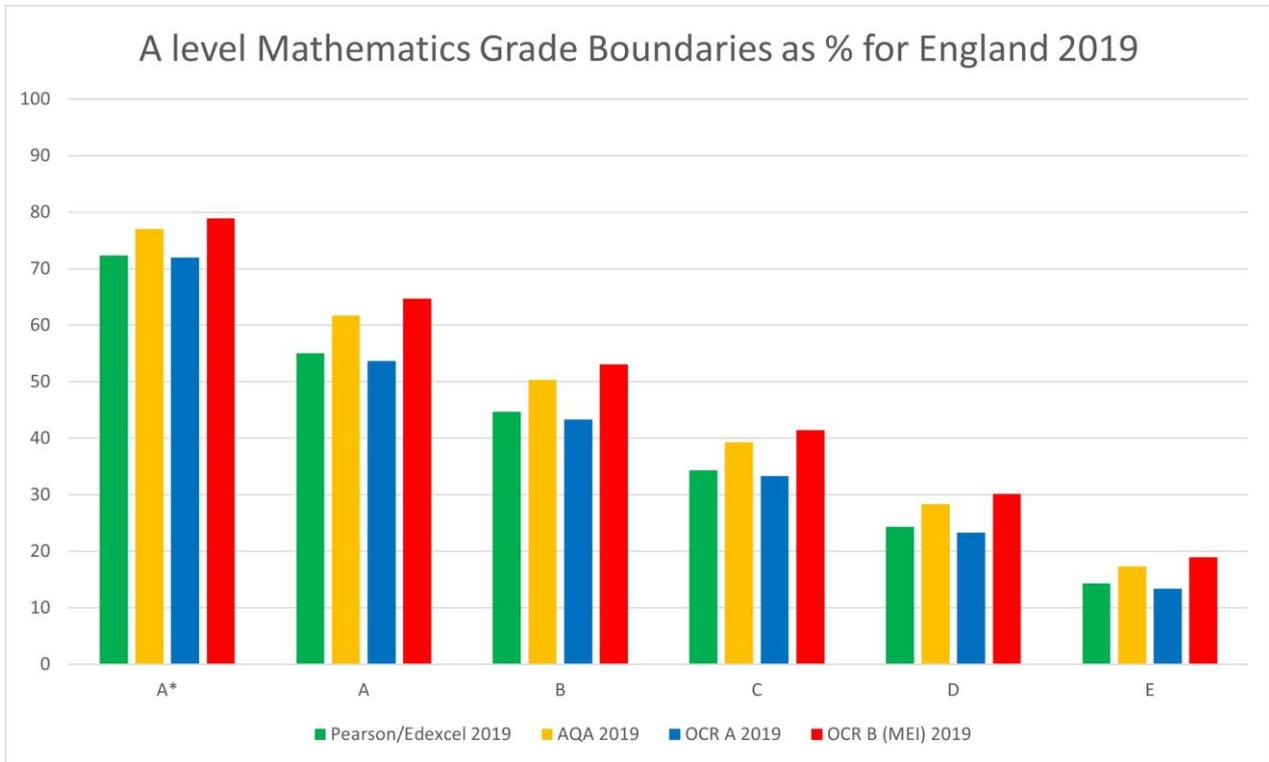


Figure 8a. A level Mathematics grade boundaries as % for 2019 National Examinations for each Specification.

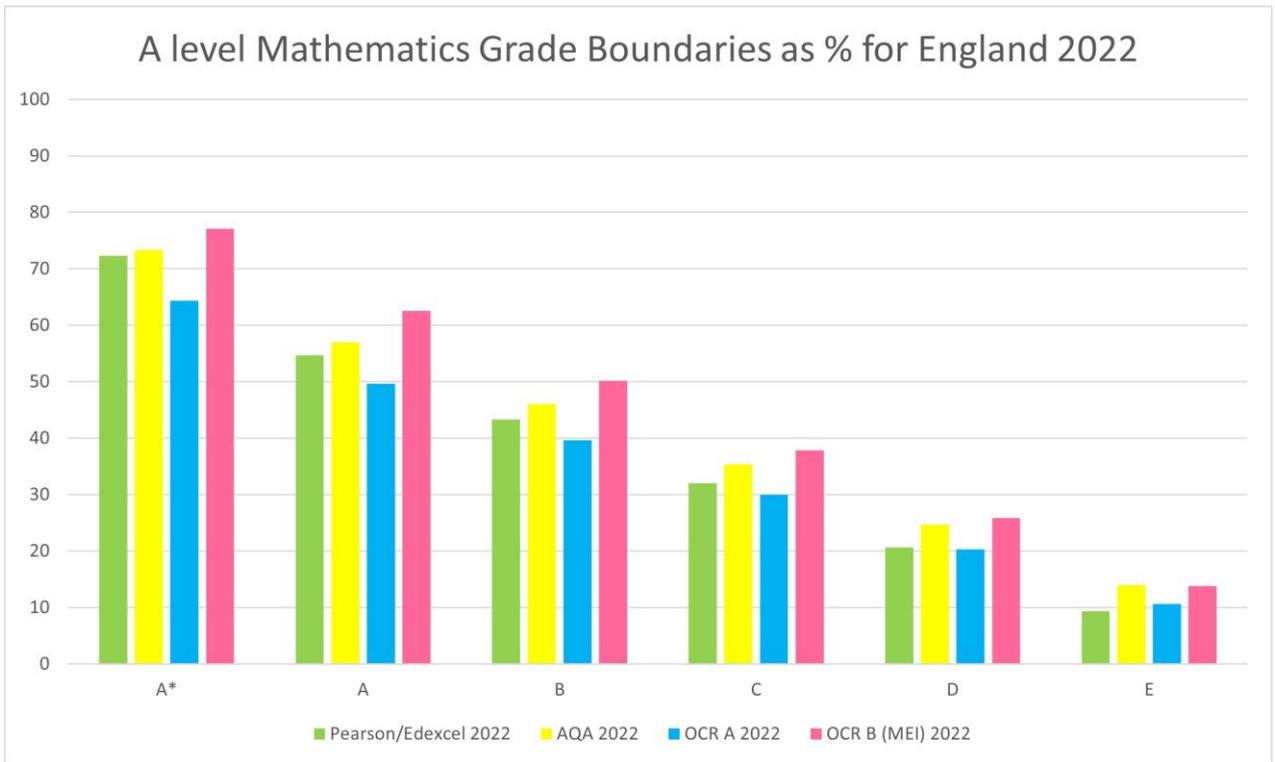


Figure 8b. A level Mathematics grade boundaries as % for 2022 National Examinations for each Specification.

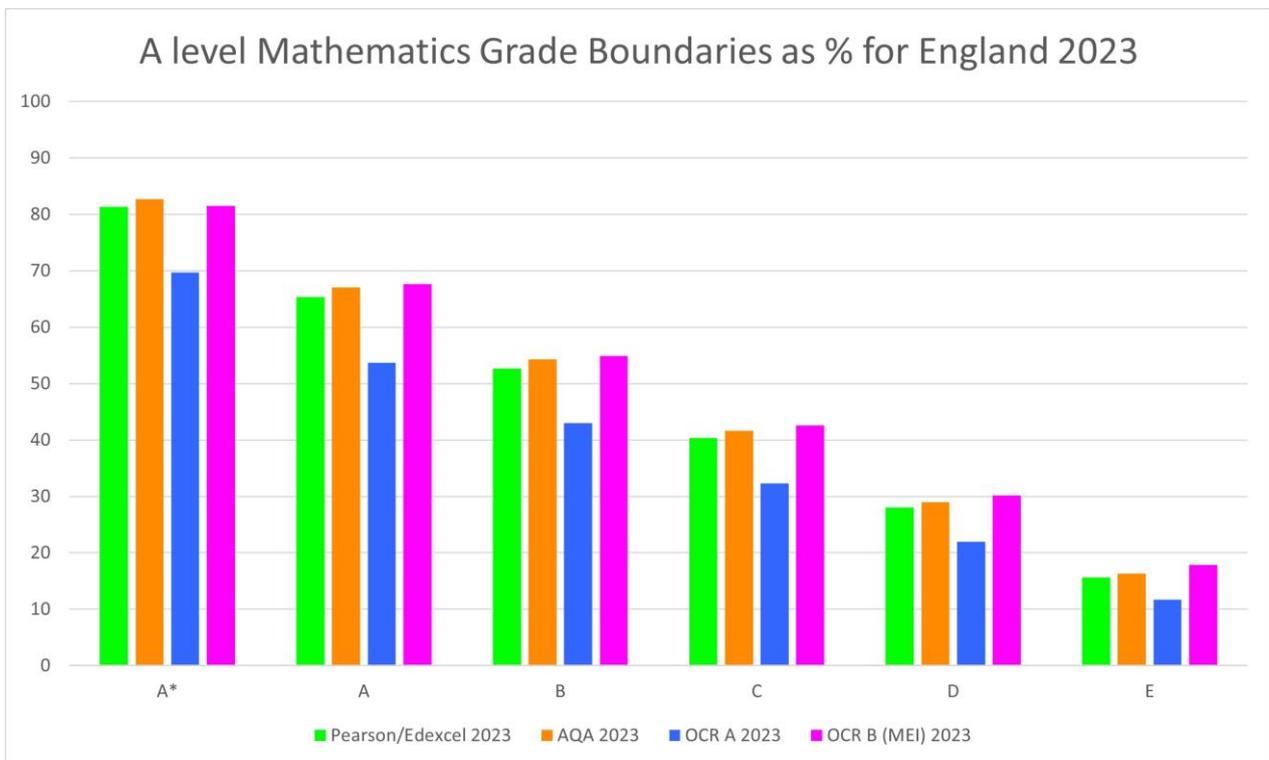


Figure 8c. A level Mathematics grade boundaries as % for 2023 National Examinations for each Specification.

(See Figures 14 and 15 in Glaister (2023) for all grade boundaries shown on the same graph as % for 2019, 2022 and 2023 National Examinations - ordered by Specification and by Year, respectively.)

## 6. References

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