



---

# Functional Skills Level 1

# Mathematics

8361 Functional Mathematics  
Report on the Examination

---

8361  
January 2020

---

Version: 1.0

---

---

Further copies of this Report are available from [aqa.org.uk](http://aqa.org.uk)

Copyright © 2020 AQA and its licensors. All rights reserved.  
AQA retains the copyright on all its publications. However, registered schools/colleges for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to schools/colleges to photocopy any material that is acknowledged to a third party even for internal use within the centre.

**8361/1 Non-calculator paper****Section A****Question 1**

Just over half of all students chose the correct response, with 7.102 being the common error.

**Question 2**

This question was answered very well, with only a small number of students putting one thousand instead of ten thousand.

**Question 3**

Just over half of all students could work out the range. Common errors were to work out the mean or write down the mode.

**Question 4**

Quite a large number of students tried to use a long division method to divide 718.6 by 100 and usually then became confused with the placing of the decimal point. Just over half of those students who attempted the question gave the correct answer.

**Question 5**

Those students who rounded the values to 10 and 4 nearly always gave the correct final answer. However, around one third of all students attempted to work out the full calculation.

**Question 6**

This perimeter question was answered well by the majority of students. There was some poor arithmetic when adding the values. A common error was to add on one or two extra sides, either by counting one side twice or by dividing the shape into two rectangles and including the inner side. A very small number of students worked out the area.

**Section B****Question 7 Birthday Party**

Students generally made a good attempt at part (a), with almost half of all students gaining full credit. Arithmetical errors sometimes led to an incorrect final answer from an otherwise correct method. A common error for less able students was to multiply £1.50 by 8 and £1.20 by 6, being the numbers in the packs rather than the number of packs. A small number of students did not make a final decision as to whether Carly was correct.

The majority of students knew what method to use in part (b), but a large number thought that  $1\text{kg} = 100\text{g}$ . Another quite common error was to write  $1000 \div 50 = 500$

Part (c) was not answered well, with only about one quarter of all students reaching the correct final answer. A common error was to give the final answer as 12, which scored one mark. Quite a large number of students added 1 and 6 and then tried to divide 2 litres by 7 or just gave the answer 7.

Part (d) was the most poorly attempted on the paper, with the majority of students not understanding the order of operations (BIDMAS). These students added 50 and 30 first and then tried to divide 140 by 80. With the small number of hours needed the students who correctly tried 1 hour, 2 hours, etc, in the formula soon derived the correct value of 3 hours.

## **8361/2 Calculator paper**

### **Section A**

#### **Question 1**

This question was answered well, with a small number of students choosing net C in error.

#### **Question 2**

This question was answered very well. A small number of students gave the answer of 104

#### **Question 3**

Just over half of all students chose the correct number of lines of symmetry, with the most common incorrect choice being 2 lines.

#### **Question 4**

About half of all students gave the correct probability, but there were many answers of  $\frac{1}{2}$ . Less able students gave a probability word as their answer.

#### **Question 5**

Less than half of the students gave a measurement within tolerance. The most common incorrect value was 50, but answers of 360 and 180 were also often seen among other values.

#### **Question 6**

This question was answered correctly by the majority of students, but a significant number only worked out the number of hours in 7 days.

#### **Question 7**

Students often struggled with this question, with only the more able students giving the correct order. Those who converted the fractions to decimals were usually the most successful. The most common error was to just write the three fractions with the numerators or denominators in numerical order.

#### **Question 8**

The majority of students knew that they should total the seven numbers first, then divide by 7, but there were some arithmetical errors. Poor use of the calculator meant that some students did not press '=' before dividing by 7, giving the answer 51. This gained some credit for knowing the method. The most common incorrect answer was to find the median. A small number of students totalled the values but went no further.

## Section B

### Question 9 Hotel

Part (a) discriminated well, with the full range of marks awarded. The majority of students gained most of the marks, but incorrect money notation for the final answer was frequently seen. A recurring issue is the number of students who get a value such as 250.9 on their calculator but then write and use it as 250.09. Less able students simply worked out 30 hours at normal pay.

Although the majority of students were very successful with part (b) there were many who thought that 5pm to 9pm was 5 hours, and similar errors were made for the other days.

The majority of students found part (c) challenging and were unable to work out a correct percentage. Some students did manage to calculate 85% or 15% by a variety of long-hand or calculator methods. Two common errors were just calculating 85% and not the remaining 15% or writing  $23.80 - 85\%$  and getting the answer 22.95. A significant number of students did not attempt the question.

Generally, students understood that they had to divide 185 by 35 in part (d), but a large number of students gave the answer as 5 weeks 2 days or 5.28 weeks, not acknowledging the fact that he gets paid once a week. A small number of students rounded down to 5 weeks.

### Question 10 Gardener

The most able students coped well with part (a) and could carry out all the steps to obtain the final cost of £99. Of the other students, the majority were confident that they needed to multiply by £2.75, and with the calculator generally managed this successfully. Several students worked with a perimeter rather than area. Other common errors were getting the answer of 13.75 from finding a third of  $15 \times 2.75$  or doing  $108 \times 2.75 = 297$  but forgetting to find the third.

Volume is a difficult topic for Level 1 students, and only the most able made significant progress in part (b). Over half of students failed to gain any credit as they could not work out the volume and then often multiplied their answer by 360. The most common incorrect answer was 2 fish or 3 fish from division of 1000 by 360. A large proportion of students did not attempt this question.

Just over half of all students successfully worked out the correct cost of the rose trees in part (c). Common errors included using the full cost for all 6 rose trees, or working out  $13.50 + 6.75$  but then multiplying that total by 6. A small number of students interpreted the question as a 'buy one get one free' discount so gained limited credit. Those who did attempt to work out the half-price cost often made an arithmetical error and gave it as £6.50 or rounded it to £7

### Question 11 Concert

Part (a) differentiated well, and the more able students tackled the scale conversion successfully. A common error was not realising that there were multiple numbers of the same type of stall. Gaps were usually seen between the stalls, but this was easier for those who only drew 3 stalls. The most common incorrectly sized stall was the drinks stall, which was often drawn as 3 squares by 2 squares. Just over 15% of students did not attempt the question.

Many different methods were used on part (b), with a fairly even split of students

using alternative methods 1, 2 and 3 from the mark scheme. Many students could work out 10% but struggled with 20%. Only about one third of students gave the correct final answer, but a large number of students gained some credit, usually for multiplying by 3.

Students who subtracted the 30 minutes first were generally successful in scoring full marks for part (c). Those who attempted to subtract the 40 minutes first often ran into difficulties. Several students misread the question and added the 70 minutes.

### **Question 12 Holiday**

Part (a) differentiated well. Many gained some credit for attempting a suitable diagram, but less than 20% produced an accurate, fully-labelled diagram. A large number of students either failed to fully label the vertical scale or made an error in their numbering. Some used totally unsuitable scales or used a non-linear scale, with a small number just labelling the six temperature from the table. Students generally chose a suitable diagram, with the most common being a bar chart. Distances and gaps between points or bars were often inconsistent and, for those who plotted and joined points, the line was often freehand or curved.

Part (b) was answered well by about half of all students. Those who failed to gain full credit made various errors. These included choosing the wrong holiday cost from the table (usually £937) and only adding on one night for the All Inclusive supplement. A small number of students added 760 + 21.50 and then multiplied the answer by 14, giving a very expensive overall cost.

Part (c) discriminated well, with the more able students working out the value and rounding correctly. Many left their answer as 880.76, rounding to nearest penny, not pound. The least able multiplied 6500 by 7.8. About 20% of the students did not attempt this question.

The majority of students struggled with part (d) on probability, mainly due to a misunderstanding of what values to include. Less than 10% of students gave the correct probability, with many seeming to misunderstand 'at least' one hour, giving  $\frac{13}{60}$  as their answer. The least able students gave a probability word or just the number of delays. This question had the highest proportion of non-attempts, which may have been due to lack of time to complete the paper.

### **Mark Ranges and Award of Grades**

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.