FUNCTIONAL SKILLS
MATHEMATICS LEVEL 2

8362/1 – Non-calculator and 8362/2 - Calculator
Report on the Examinations

8362
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8362/1 – Non-calculator

Section A

Around a quarter of students were able to answer **question 1** correctly, with the majority incorrectly selecting 80 × 0.47

It was common to see an answer of 5.8 or 0.58 for **question 2**. A few students attempted a bus stop division with good results.

Question 3 was very well answered, with around 90% scoring the mark.

In **question 4**, around a third of students knew to sum the three given numbers, although there were a lot of arithmetical errors when trying to handle decimals without a calculator. This total was sometimes divided by 3, and some students stopped when they got to 0.839

Question 5 was the order of operations question, which differentiated well. There were a lot of responses that attempted the bracket and then divided by 5, ignoring the 2. It was also quite common to see + 2 rather than × 2. Forgetting to deal with the 2 and 5 after the bracket was attempted was also reasonably common.

Section B

Q6 Fruit and vegetables

Part (a) was well attempted, with many students having success drawing the vegetable patch. Converting the 4.5m for the greenhouse proved troublesome for many. It was common for students to draw the circular fruit patch without a compass and to mix up the radius and diameter measurements. Forgetting the labels was also a common reason for students to drop a mark.

It was good to see the majority of students attempting to work out the median and range in **part (b)**. The range was answered more accurately than the median, with students often able to identify the 293 and 333 needed. Compared to previous series, there was an increase in the proportion of students who were able to link the range to the consistency, which was good to see. It was common to see the error that 'the larger the range the more consistent the values'. Calculating the median proved more difficult, with many students attempting a mean average calculation or commenting that the numbers looked larger. Around 50% of those who identified the middle values as 304 and 310 were able to work out the median as 307, with the rest often thinking it was 306

Part (c) had very mixed responses from students. Less than 15% of students were able to understand the ratio and proportion aspect of the question. It was common to see a calculation of the difference in the amounts, so 1.5 kg for raspberries and 1.6 kg for sugar. Just over 10% were able to pick up one mark, often for 2.4 ÷ 2, but got no further. Those who converted to kilograms had mixed success,
1 kg = 100 g was seen quite regularly, and those attempting this route regularly made arithmetical errors. There were very few non-attempts on this question part, indicating that students managed their time well.

8362/2 - Calculator

Section A

In **question 1**, just under half of students were able to identify the integer. The next most common response was the negative value.

Writing the number in words in **question 2** was handled well, with around 60% scoring the mark. Answers including ninety five million and fifty seven thousand were frequently seen, along with writing 2 hundred instead of the word 'two'.

The ratio in **question 3** had mixed responses. It was common to see students not converting to the same unit, often giving answers of 3 : 9 and 1 : 3

Overall, students managed to plot the coordinates in **question 4** reasonably well. Those who didn't score had generally reversed the x and y coordinates. Point X at (3, 5) was the most successfully plotted.

About half of the students knew that the shape in **question 5** was a triangular prism. Answers of trapezium and pyramid were also commonly seen.

It was evident in **question 6** that many students are unable to use a calculator to calculate with fractions and mixed numbers, with around 40% scoring the mark. The answer of $\frac{23}{20}$ was a common occurrence, where students thought $2\frac{1}{5}$ meant multiplying the one fifth by two. Adding the numerators and then adding the denominators, getting an answer of $3\frac{4}{9}$, was also seen.

Many students were able to pick up one of the marks in **question 7**, generally from getting an answer of $20 \div 8 = 2.5$, thus forgetting the half in the area of a triangle formula. A few students thought it meant a perimeter of 20 cm

The majority of students were able to pick up some marks in **question 8**. The need to carefully read the question was apparent here, with numerous students misreading k as 1.8 and therefore losing a mark. The answer of 16.4 was a common error, where students had written $3k$ as $3 - 1.8$

Section B

Q9 Lorry driving

Students found **part (a)** very challenging, with a lot of responses ignoring the given graph and trying to calculate something with the numbers in the question. The answer of 'no, as the graph only goes up to 30 miles' was also routinely given. Those who read a conversion from the graph often struggled to multiply up. Using 5.3 instead of 5.5 hours was also common, as well as getting the division for speed the wrong way round.

Substituting the values into the formula in **part (b)** proved difficult. Many students were able to score part marks for writing 65 × 5 or 325 and getting to 829 and 0.1022 Students commonly thought they were required to work out the pay per day.

Q10 Fundraising

Part (a) saw many confident responses, with most students being able to pick up part marks. Around 30% scored half marks for identifying one third and two -fifths correctly, although students regularly summed rather than multiplied these together. There were very few responses that listed the different outcomes, although those seen were generally fully correct. Students sometimes lost a mark for writing one third as 0.3 when multiplying with 0.4

Many students had a good attempt at **part (b)**, which was multi-faceted. Students generally showed a clear set of workings, which helped them pick up part marks. As is often found at level 2, calculating the circumference of a circle is a challenge, and this part of the question proved troublesome for most. The mark scheme positively awarded students who were able to make part progress, and two marks were regularly scored for adding at least two straight lengths together and multiplying this sum by 3.25

Part (c) on compound interest produced a range of scores. A lot of students were able to pick up two marks for calculating 2350 and 70.5 but then thought that it was simple interest and added four lots of 70.5 onto the 2350 The students choosing the less efficient build-up method generally made arithmetical errors along the way.

Q11 Ice cream

Part (a) differentiated well. The stronger students laid out their workings well and were successful in working through the multiple steps of the question. The weaker students were often able to pick up one mark for 5 × 1000 or two marks for getting as far as their attempt at the volume of 200 scoops of ice cream. A few responses were able to work out that 4 tubs were required, but didn't score full marks due to a lack of workings.

Although **part (b)** was well attempted, only the strongest students were able to score on this reverse percentage question. The majority of students thought they needed to calculate 15% of 76.50, and a few thought they should add 0.15 to 76.50 to give an answer of 76.65 It was possible though to score a mark for 76.50 + 14, and this was seen in several responses.

There were some good answers seen for **part (c)**, with alternative methods 1 and 4 seen most regularly. Around 15% of students scored two or three marks on this question. A reasonably common error was summing 79, 161 and 104 and then subtracting 196 from this total. Occasionally, students thought that at least one topping meant they couldn't include those who chose two toppings.

Q12 Bees

Nearly all students made an attempt at **part (a)**, but few scored more than two marks. Being able to calculate the conversion of one of the lengths in inches to cm and knowing to multiply by 8 were the two most successful steps. Getting the conversion the wrong way round was a common error. Attempting to calculate the total area of a frame, or of the eight frames and then dividing by the area of a rectangular piece of honeycomb, was also regularly seen and could score a maximum of two marks.

In **part (b)** students who measured the angles in the pie chart were accurate and often knew how to proceed with the question. Around 60% did not measure any angles, and it was very common to see a response that packet 1 had 3 out of 6 (or a half) of flowers that are bee-friendly.

Part (c), where students needed to calculate the mean from a grouped frequency table, proved very difficult, as we regularly see at level 2,. Some students managed to find the midpoints, and sometimes got as far as 535, but didn't know how to continue. Only the strongest students were able to understand the ratio part of the question.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.