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

Question 1 was answered correctly by around 53% of students, with the most common incorrect answer being $\frac{2}{9}$: 1

Writing the number in words in **question 2** was achieved by around two thirds of students. Those not scoring the mark often wrote 49 thousands or used the digit 3 or 200 instead of the word.

Just over half of all students were able to draw the plan of the solid in **question 3**. It was fairly common to see a net of the solid or a 3D diagram attempted.

Question 4 was the order of operations question, which differentiated well. There were a lot of responses that attempted 3.86 + 0.013 before multiplying by 5, which scored zero. On this non-calculator paper 0.013 × 5 was often incorrectly worked out as 0.65 or 0.0065 Around 28% of students scored full marks and 13% scored one mark.

Question 5 proved to be the hardest on this paper, with students often not recognising the need to compare fractions with common denominators. Several were able to pick up one mark for changing the mixed number to an improper fraction or for getting $3\frac{1}{4}$. Those who attempted the bus stop division method to change both quantities into decimals were generally successful.

Section B

Q6 Toy cars

Part (a) was well attempted, with around 62% of students scoring full marks. Several were able to plot the correct point but wrote the x and y coordinates the wrong way round on the answer line, dropping one mark.

Most students recognised the need to calculate the mean in **part (b),** although some struggled with the arithmetic. Many struggled to recognise the link between the word 'consistency' and needing to work out the range. As we often see at level 2, students found it a challenge to write comparisons, with many writing a lot of words with no reference to the values they had worked out or to the values given.

The best buy question in **part (c)** saw nearly all students having an attempt. Only the strongest students were able to handle the different hours per battery as well as the different pack sizes. Around half of students were able to pick up half marks for comparing the total hours per pack or for working out the two different costs per battery.

8362/2 – Calculator

Section A

Around 45% of students correctly identified the median in **question 1**.

Ordering the positive and negative integers in **question 2** was handled very well, with 94% of students scoring full marks.

Working out the missing angle in the triangle in **question 3** was well answered, with over 63% scoring full marks. There were some arithmetical errors in the addition of 76 and 59 when students weren't using a calculator and subsequently lost accuracy marks.

Question 4 required students to work out a percentage increase. Around half of students were able to pick up a mark for working out the difference between the two numbers before getting stuck. Some tried a build-up method, often with less success.

Working out the perimeter of the semi-circle in **question 5** proved very challenging, resulting in the lowest scoring question on the paper. Many students thought they needed to work out the area, which in many cases they knew how to do. Those who attempted a circumference regularly confused diameter and radius and only the strongest students remembered to add the diameter to half of the circumference for the final answer.

Section B

Q6 Holiday

Students used various approaches in **part (a),** with alternative methods 1 and 4 proving the most popular. The question differentiated well, with a range of scores seen.

The probability question in **part (b)** proved challenging and this was reflected in the scores achieved. Some students were able to pick up a mark for $1 - 0.55$ or 0.45 but most students thought they needed to multiply by 2 for the two guests rather than squaring. There seemed to be a general lack of understanding that a probability had to be between zero and one.

Part (c) involved compound and simple interest, and students regularly got these confused. Many did either simple for both banks or compound for both. Some struggled to convert the percentage to a decimal and it was quite common to see 0.21 or 1.0021 being used. Weaker students commented just on the bank A percentage being larger than bank B.

Q7 Skateboarding

It was very pleasing to see students cope well with the in-depth problem-solving in **part (a)**. Many were able to read and interpret the scale correctly and substitute into the formula. There were a few mistakes in recalling the density formula, but overall this was the best performing question on the paper. The mark scheme positively rewarded students who showed tenacity with the follow-through accuracy marks.

Part (b) was the second most successful question on the paper, with over 14% of students scoring full marks. Students coped well with interpreting the words and completing the two-way table. The question differentiated well, but even the stronger students regularly weren't sure how to take the value in the table and turn it into a probability, therefore missing out on the final mark.

Q8 Walking marathon

Students took lots of different approaches to the distance, speed, time question in **part (a)**. Overall there was a general confusion as to how to convert a decimal time into hours and minutes. This, along with students struggling to recall the formula for speed, led to multiple restarts by students. Around 60% of students were able to pick up some marks here, but only around 6% scored the higher marks.

Part (b) was calculating the mean from a frequency table. As we often see at level 2 this is a challenging topic, and this question was no exception. The overall mark was lower than comparable questions on previous series, and many students struggled to pick up the first mark for completing the midpoints. Around one third of students didn't attempt the question.

There were some good answers seen for **part (c),** with the majority of students using alternative method 1. Weaker students often decided to subtract a tenth or ignore the ratio altogether.

Q9 Garden Pool

There were a range of scores for **part (a)**, where students had to calculate the volume of the cylinder and deal with the rate using litres and cubic metres. The stronger students showed really clear working , regularly making an error in the volume but showing all the correct steps from there. This could pick up 4 out of the 6 marks. The weaker students struggled to get started, and used any or all of the numbers in the question to do some calculations.

The last question in **part (b)** saw many confident responses and most students were able to pick up part marks. The one sixth proved difficult for some, with many changing this to 16% and then attempting to subtract 0.16 or changing this to £1.60 or £16.60. Only 9% of students who attempted this question didn't score.

Mark Ranges and Award of Grades

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