AQA

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

Identifying the largest decimal in **question 1** was reasonably well answered. The most common incorrect choice was 0.7516, which was the value with most digits.

Using order of operations in **question 2** was well attempted. Over half of students scored full marks on this question. It was fairly common for students to evaluate 2^3 as 6 or to calculate $22 - (7 - 5) = 20$ and then attempt to cube this.

The fraction addition in **question 3** only required the change of one denominator, although the majority of attempts were to change both fractions to have a denominator of 12 or 18. Adding the numerators and adding the denominators to give $\frac{6}{9}$, often simplified to $\frac{2}{3}$, was seen regularly.

Students using the bus stop method to divide a decimal by an integer in **question 4** were generally able to score at least one mark. Students attempting to multiply up had little success. Answers of 217, 21.7 and 2.17 were regularly seen.

Writing the given number in digits in **question 5** proved a challenge, with just over a third scoring the mark. Students generally missed out the zero before the 4 or the 6 or both.

Section B

Q6 Call centre

Students found the task of estimating the mean from the grouped frequency table in **part (a)** difficult. Common errors included summing the given midpoints to get 80 and then dividing this by the 4 groups to give an answer of 20. Another common misconception was adding the given midpoints to the frequencies. Around 15% of students scored two marks, generally from getting to 285 and then either stopping or dividing by 4 instead of 15. A few students got to 19 but didn't make a conclusion on whether Troy had met his target.

Part (b) differentiated well, with the full range of marks seen. It was common to see students giving the fraction as $\frac{12}{78}$ and simplifying this to $\frac{2}{13}$ Several students used 40 from the y-axis as the denominator or 10. Many were able to pick up the B mark for simplifying their fraction.

Part (c) was on the topic of tax and national insurance, which has not been asked very often on this specification. Students were not well prepared to answer this question, with the majority not understanding the need to find the taxable income first. The common misconceptions were calculating 20% of the total salary or of the £12 570, both methods able to access two of the four marks available. Less able students tried to work out 20% by dividing by 20.

8362/2 – Calculator

Section A

Question 1 was answered correctly by nearly two thirds of students. The most common incorrect answers were 3 and 4.5

Students found **question 2** on using a scale difficult, although there was no common incorrect response. Around 10% scored one mark, generally for getting to 18 but omitting the unit. Several students attempted a build-up method but had little success as they struggled with the 0.2 Attempts of $7.2 \times 2 = 14.4$ and $7.2 \times 5 = 36$ were regularly seen.

Around a half of all students gained full marks on **question 3**, where they were required to substitute values into a formula. Seeing 3.6×2 was fairly common and attempting to substitute in 1.7 and getting 41.7 was also a common error. Just over a third of students were able to score one mark for getting 3.6^2 or 4×1.7

Question 4 proved to be accessible to students, with over two thirds being able to correctly order the fractions. Those converting the fractions to decimals achieved good success. Several students lost a mark by giving their answer in descending order.

Approximations generally prove a challenge to level 2 students, and **question 5** was no exception. Around a third of students approximated one of the values correctly. Usually this was 6.1 approximated to 6, with 376 025 remaining the same. Many students scored zero by ignoring the instruction to approximate and trying to work out the exact value of the calculation.

Question 6 was answered well, with around two thirds of students scoring 2 or 3 marks. Common errors were 0.4% or 25% instead of 4% and having the incorrect number of zeros in 0.007 The fraction was the most commonly correct answer, with answers of $\frac{1}{23}$ and $\frac{23}{10}$ occasionally seen.

Section B

Q7 Jam

Part (a) was very well attempted, with over 60% of students scoring at least 4 marks. Working out the cost of the blueberries proved the hardest step, with $1.79 \times 3 = 5.37$ seen regularly. Students were often able to calculate 68p as the cost of the lemons, but quite often forgot to convert to £0.68 when including it in the addition. It was fairly common to see students completing the addition without a calculator, which meant that arithmetic errors crept in. Students continue to often misinterpret an answer of 10.4 on the calculator as £10.04

Part (b) proved challenging, with the majority of students struggling to recall how to work out the volume of a cylinder. A large number of students forgot to include π in their calculations and several attempted to calculate the circumference. Around 20% of students were able to score two marks here by multiplying their volume by 1.29 with the accuracy ft mark available.

Part (c) was a multi-step problem-solving question and the marks were well distributed. Nearly 20% of students scored full marks, and the mean score was around 3 out of 6 marks. The majority of students were able to work out $42 \times 4.5 = 189$ and subtract this from the total takings to give

56.7, but some students stopped at that point. Around half of students were able to continue and calculate the reduced price of £3.15, or the reduction of £1.35 Many were unsure how to use this value to work out the percentage reduction.

Q8 Electric car

Part (a), requiring finding the total cost of the charging point, proved the most challenging on the paper, with less than a quarter of the students scoring a mark. The additional guidance listed the usual common mistakes of increasing 525 by 40%, reducing 525 by 40% and calculating the value of a 40% increase. All these were seen regularly.

Scatter diagram questions, as in **part (b)**, continue to prove challenging at level 2. It was very common to have no line of best fit drawn, resulting in a maximum of one mark being awarded. Missing the coordinates and misreading the scales, 1 unit per square on the vertical axis and 2 units per square on the horizontal axis were also common mistakes. A lot of students attempted calculations when they hadn't drawn a line of best fit, which used up time with no marks awardable. There were very few non-attempts, but over 80% of students scored 1 or 0 for their efforts.

Q9 Fitness gym

Using the mean averages on different combinations of days in **part (a)** was difficult, and around 18% of students didn't attempt this question. Students either knew the full method or were generally unable to start. A fairly common response was to add the 21, 26 and 32 and then divide this by 3.

Calculating a probability from a Venn diagram in **part (b)** was fairly well answered and a range of marks were scored. Nearly two thirds of students were able to score at least one mark for working out 67 or 53. It was common for students to then divide this number by 2 or write the probability as $\frac{1}{53}$, $\frac{1}{67}$ or 53% Calculating the probability of attending just Yoga or just Zumba was also a fairly common incorrect answer.

Part (c) gave a speed and a time and the task of working out the distance. Only the more able students could make significant progress. Over 50% of students attempted the question but did not score. These responses were generally from calculating $7.24 - 4.125 = 3.115$, which was subtracting a speed from a distance, or $36 \div 7.24 = 4.97$ and then working out the difference to 4.125, giving an answer of 0.845.

Q10 Craft business

Part (a) was a successful question for many, with around 40% scoring full marks. Many students attempted a build-up method to work out 17% of 395, where errors and lack of working often prevented marks being awarded. The lower-attaining students thought they could work out 17% by dividing by 17.   Calculating 17% of 350 was seen quite regularly, and it was common for students to subtract their 17% of 395 from 350 in error, scoring a maximum of one mark.

Part (b) had the most non-attempts on the paper at just under 20%. Similar to question 7b, which required the area of a circle, students were not confident in calculating the circumference of a circle

$\dfrac{1}{4}$ instead of quarter of the diameter, meaning a maximum of 3 marks could be scored in this case.

There was a similar number of non-attempts on **part (c)**, which could indicate that students struggled to manage their time effectively. Many decided to add the parts of the ratio to give 5 and then work out 560 ÷ 5, rather than recognising that 560 related to just the small bears. Several students got to 840g, having worked out how much is needed for a large bear, but then chose to divide by 10. Errors in converting between kilograms and grams were also reasonably common.

Mark Ranges and Award of Grades

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