Functional Skills Level 2

Mathematics

Paper 1 and 2

Report on the Examination

8362

January 2020

Version: 1.0

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PAPER 1 Non-calculator paper

Question 1

This question was very well done.

Question 2

This question was very well answered by the vast majority of students.

Question 3

This question was not done well, with the most common incorrect response being –36.

Question 4

About three quarters of the students were able to correctly work out the size of the angle. Common errors included stopping after 42 + 85, subtracting 127 from a value other than 180 and arithmetical errors, usually in the subtraction.

Question 5

This question was answered correctly by less than half of the students. It was very common for students to work out 61 – 4 = 57 first, and arithmetical errors such as 61 – 32 = 31 and 4 × 8 = 36 were quite common. 2^3 was sometimes evaluated as 6.

Question 6

Very few students knew what was required in part (a). The majority did not realise that a line of best fit was required. Plotting the additional points was not always done, and when errors were made in plotting them it was usually the point (3500, 96) that was incorrectly plotted. Many students knew that the units ‘beats per minute’ or ‘bpm’ had to be added to their answers.

In part (b), a completely correct solution was rarely seen. Many students knew that two of the numbers 12, 15, and 16 had to be multiplied together, and those who did know that the product of all three was needed often made arithmetical errors on the way. When working out the number of sick days, students were often able to work out either 40% of 70 or 70 × 130 but then made no further progress, often due to attempting to move on with 60% instead of 40%. Those who did manage to find their way to a total gym cost and a total in the sick days often chose the wrong values from their work to use to find the saving. Many used the grid method to find products and were usually successful in showing sufficient working out. Finding 40% was not always done well, and those using build-up methods often failed to show sufficient working out to indicate that correct methods were actually being used.

PAPER 2 Calculator paper

Question 1

Just over half of the students chose C as the correct answer. Over one third of the students gave A as their chosen answer.

Question 2

Approximately three quarters of the students gave the correct coordinates. A common error was to give the coordinates reversed.

Question 3

Just under half of the students were able to correctly work out the increased value. Some were able to find 27% but failed to add it on, while others did not know how to find 27%. Build-up methods were quite common, but often these did not show full working and had errors.

Question 4

The majority of students knew how to use the graph and read the value correctly. A common error was to read the horizontal scale incorrectly, with answers of 15.3 or 15.6 then being given. Most of these students attempted to use the graph correctly.

Question 5

Just over one third of all students were able to add the fractions correctly. The most common errors seen were to multiply each fraction by its accompanying integer before adding, which usually led to answers of 2.35, $2\frac{7}{20}$ and $\frac{47}{20}$. $3\frac{7}{9}$ was also commonly seen.

Question 6

This question was generally well done, with approximately two thirds of students stating both the fraction and the decimal correctly. Common errors when writing the decimal were to give 0.37, 0.38, or 0.37.5 as answers. Common errors when writing the fraction were to give $\frac{15}{10}$ or $\frac{1}{5}$ as answers.

Question 7

The area of the shape was not found correctly by the majority. Many students thought that adding the lengths would give them the area required. It was quite common for students to correctly find the area of the rectangle using 37 × 42 and then halve this to find the area of the triangle. Less common, but also seen, was the product of the three lengths given on the diagram.

Question 8

It was very rare to see a completely correct solution to part (a). Many students used upper class boundaries instead of mid-class values, often just adding them rather than finding the products with the frequencies. Others made up some frequencies that added to 23 and wrote them in the table.

Students were more successful with part (b), with approximately half finding the probability correctly. Some students made addition errors when adding the values in the table, and giving the answer as a ratio or as 34 out of 53 were both fairly common as incorrect answers.

Part (c) was not as well done as part (b). It was quite common for students to misunderstand what was being asked for and give the answer as $\frac{9}{30}$.

Part (d) was generally not done well. Although many students were able to find 480 they often went on to find $\frac{1460}{480}$ rather than $\frac{480}{1460}$ or subtract 480 from 1460. Some students did not know how to start, and worked with 65000 views, often by working out $\frac{1460}{65000}$.

Question 9

A relatively small number of very good solutions were seen to part (a). Answers of 0.144 from having not multiplied by 300, 14.4 from having not used the '3' from the ratio, 0.18 from having not multiplied by 240 and 43200 were all quite common. Some students did not realise that there are 1000 g in 1 kg and used 10 or 100 as the divisor, while others thought it was necessary to multiply by 1000 to convert from g to kg.

It was very rare to see a completely correct solution to part (b). The majority did not know the formula for the volume, and 9×2.8 was quite commonly seen. Many students did know that they needed to divide their volume by 6 and then often divided the result into either 425 or 425000. Some students incorrectly thought that 425 should be divided by 6.

Question 10

In part (a) it was quite common to see 13500 – 927.5 = 12575.5 or for students to stop at 11130.

It was very rare to see compound interest correctly attempted in part (b). Most realised that the number of years was 7. Many did not know how to find 1.5% correctly and those that did often then multiplied 30 by 7 to find 210 and either added 210 to 2000 or subtracted it from 2000. Some added the 30 to 2000 and then multiplied the total by 7. Other common starting points were $2000 \times 1.5 = 3000$ and $7 \times 1.5 = 10.5$

Question 11

It was very rare to see a completely correct solution to part (a). Common errors when substituting into the formula were not squaring the denominator and squaring the numerator incorrectly. It was quite common to see students then divide their resultant answer by 4 rather than dividing it into 400. Those who did substitute into the formula correctly often rounded their answer before finding the number of pendants that could be made. Some students thought it appropriate to round up instead of truncating when finding the number of pendants.

Just under a third of the students found the probability correctly in part (b). The most successful route was to choose 11 as the total number of pendants, so then there were 9 which were blue or yellow, and divide this in in the ratio 2 : 1 to find there were 6 blue pendants in total. It was quite common to see decimals introduced, with $\frac{2}{11} = 0.18$ or $\frac{11}{3} = 3.6$

Question 12

In part (a), many students encountered difficulties in finding the driving time. 2.25 hours = 2 hrs 25 minutes was very common, and some found 48 x 2 = 96 then 108 – 96 = 12, with a driving time of 2 hrs 12 m. Instead of subtracting from 2.30 pm and working backwards it was quite common for students to make up a starting time and then add on, which was usually unsuccessful as starting times were rarely modified to get a finish time of exactly 2.30 pm. Some students decided that 59 minutes should be rounded to 1 hour.

Part (b) was not done well. Many students forgot to double for the return journey and divided by 3 instead of 4 for the cost per person. Conversion from pounds to pence was sometimes incorrectly done and those who did find 8.64 as the number of litres often then rounded it to 9 before moving on.

In part (c), 20% of 59 was a fairly common approach, usually leading to 11.8, but not always with the correct decision. It was also quite common for those finding 12 as a percentage of 59 to think that 20.3% was the same as 20%. Others thought that it was necessary to either combine wins and draws or use 100 in some way.

Mark Ranges and Award of Grades

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