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## FUNCTIONAL SKILLS MATHEMATICS LEVEL 1

8361 Report on the Examination

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#### Paper 1

#### Section A

In **question 1** the majority of students chose the correct direction, but all options were chosen. 16 was the most common incorrect choice and a small number of students circled 64 and 16

All options were chosen by some students in **question 2**. Just over half of the students circled the correct option, with  $\frac{2}{6}$  being a fairly frequent incorrect choice.

Answers of -11 and 7 were common errors in **question 3**, but about 70% of students gave the correct value.

Students often did not round 2.97 to 3 in **question 4**, despite the instruction. Those who did generally then multiplied successfullyby 45, but a small number then tried to put back the decimal point.

The conversion to a fraction was the least well answered part in **question 5.** Common errors included  $\frac{2}{5}$  and  $\frac{25}{10}$ . For the percentage conversion, the main error was to state it as 3%. Only about a third of all students gained all 3 marks.

#### Section B

#### Question 6 Flags

**Part a** was a slightly different scale drawing question to usual. A small number of students only measured part way up the flagpole, and quite a significant number started labelling 0.5 at the bottom of the flagpole, therefore counting 10 squares instead of 9. Students sometimes forgot to make a decision, so only gained 2 out of the 3 marks.

Students who could interpret the pictogram in **part b** often added up to the total of 36 but then just said that 15 was more than one third without working out 12. Students generally used the key to interpret the pictogram, but a significant number then gave Animal as 10.5 and National as 14.5. Those students who counted the number of shapes did not usually make this mistake, but did not seem to know how to progress from their total of 18. Quite a significant number of students totalled the other three types of flags to 21 and then tried to compare 15 out of 21 to one third.

**Part c** differentiated well, with the most able students being able to read the chart correctly and knowing how to work out the mean. Some, however, added up the numbers to 40 but did not progress any further. There were some reading errors from a small number of students, but the less able students did not know what to do with the readings. Answers such as '3 of the months are greater than 7' were common, and stating that the mean must be more as May is 12 was also seen.

#### Paper 2

#### Section A

**Question 1** was answered correctly by just over 60% of students, with angle d being the most common error

In **question 2** only half of the students knew that there were 3 lines of symmetry, with 1 line being the most common incorrect choice

Students could usually write the number in words for **question 3**, with spelling mistakes largely ignored if the value was clear. Nine thousand one hundred and seventy-two was a common error.

Students found **question 4** challenging, with common errors being answers of 3 and  $\frac{2}{8}$  Less than one third of the students gave the correct answer.

The majority of students gained at least 1 mark in **question 5**, with those gaining only one mark usually having 0.25 in the wrong place or ordering from smallest to largest. A small number of students seemed to work on the premise that the decimals with the most digits were the largest.

**Question 6** was poorly attempted, with less than 2% able to round to 2 decimal places. Common errors included rounding to 2sf and simply moving the decimal point two places.

Students found percentage increase challenging in **question 7**, with less than a quarter of the students giving the correct value. A small number of students could work out the 15%, but did not add it on. Over 60% of the students could not work out 15%, with the most common error being to divide  $\pounds$ 126.80 by 15

**Question 8** was answered quite well, with over 75% of students choosing at least one correct diagram.

#### Section B

#### Question 9 Soup

Many students found **part a** difficult to interpret due to the mix of units. Fewer than 15% of students gained full marks, with the most common error being to work out the extra needed so that he had 1.2kg of carrots. The majority of students did know that there are 100 grams in a kilogram.

In **Part b** a large number of students did not realise that the volume needed to be worked out, and therefore added or combined the dimensions in different ways. Of those who worked out the volume a small number did not convert the units to make a proper comparison.

Students either made good progress with the pie chart in **part c** or no progress at all. Those who worked out that the chicken sector was 4 times as large as the lentil sector often then got to 32. Some then forgot to multiply by the cost. A small number multiplied the 4 (times bigger) by the cost. The weakest students just multiplied 144 by  $\pounds$ 3.49

#### Question 10 Flooring

**Part a** differentiated quite well, with over 15% of the students giving fully correct solutions. Students could often work out the cost for EZ correctly, but struggled with the 20% of 48 for Tool Hire.

Errors included dividing by 20 and subtracting 20. Those who did work out 20% often did not multiply by 3.

A significant number of students worked out the £9.60 discount for Tool Hire but compared this to the £37.50 price for EZ

In **part b** the majority of students could not work out the area of the L-shape, but were able to calculate the number of litres needed for their area. Only about 10% of the students gained more than 2 marks. Perimeter was often calculated instead of area. When students knew to divide the area into two rectangles, they could often work out the area of one successfully, but used whole side lengths for the other: for example, working out 2.5 x 3.7 and adding it to 6.5 x 3.7 Those who did split up the sides often thought they were split in half, so used 2 lots of 3.25 for the base.

**Part c** was answered quite well, with nearly 60% of the students gaining 2 or 3 marks. Any errors were usually seen in converting minutes to hours and minutes.

#### **Question 11 Garden Centre**

**Part a** differentiated well, with less than 15% of students failing to gain any credit. Students could usually complete the frequency table correctly, but errors came in poor use of a linear scale or incorrect choice of diagram. Bar charts were the most popular, with vertical line graphs and pictograms acceptable. Heights usually matched their scale, but only the most able students added labels.

**Part b** also differentiated well, with the full range of marks seen and all alternative methods used. Those students who totalled both sets of prices and then divided the normal price by two were generally the most successful. Halving or doubling one set often led to an incorrect conclusion, as students were confused about what they were comparing. The least able students just compared a couple of items and said they were not less than half price. A significant number of students totalled the two lists but then just said that the discount price total was cheaper.

#### Question 12 Electric car

Although the percentage in **part a** was an easy 10%, a large number of students still could not work this out. Often, if they did calculate it, they would round the value of 3254.9(0) to 3254. Other students did not multiply £638 by 48, so just added 3254.90 and 638. When comparing the two Options, students did not seem to understand which values to subtract.

Students continue to find using a formula difficult and do not understand the order of operations. This **part b** was made more difficult by them having to work out the number of hours first. The most common incorrect values for the hours were 5 and 3. A large number of students added the price of parts to 352.50 before multiplying by the number of hours.

The most able students demonstrated a variety of very good methods to answer **part c**, but the weakest multiplied 28 by 3.2 and made no further progress. A common error was to divide 80 by a quarter and a small number of students only considered the journey to work. More than 60% of

students failed to gain any credit. Some of this may be down to a lack of time at the end of the paper.

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### Mark Ranges and Award of Grades

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