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# FUNCTIONAL SKILLS MATHEMATICS LEVEL 2

8362/1 and 2 – Paper 1 Non Calculator and Paper 2 Calculator  
Report on the Examination

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**8362/1- Paper 1****Section A**

In **question 1** less than half of the students could round the number to the nearest 500. Common incorrect answers were 2000 and 2400

**Question 2** was answered correctly by less than half of the students, with the options 3.1 and 0.04 being chosen by a significant number.

A common error in **question 3** was to divide 192 by 5 instead of 6. A small number worked out that 192 divided by 6 was 32 but then did not know how to give the answer, with 3:2 being fairly common.

**Question 4** was answered quite well, with about 70% of students understanding the order in which to do the operations. Of these students, quite a significant number thought that  $4^2$  is 8 so only gained 1 of the 2 available marks.

A large number of students did not know how to work out exterior and interior angles for **question 5**, with only about a quarter of the students gaining both marks. A very small number knew the method but could not accurately subtract 72 from 180. Common errors included subtraction from 360, doubling 72 or thinking that the angles were both 72

**Section B****Question 6 Cheese**

**Part a** differentiated well, with the whole spread of marks seen. Only the most able students could add these relatively easy fractions together, with a common incorrect answer being  $3\frac{8}{12}$ . Those who converted to decimals often made arithmetical errors.

The majority of students knew the formula for the circumference of a circle for **part b**, but often could not multiply 3.14 by 1.5 successfully. Few then went on to divide by 5 to find the speed per second, with many students multiplying instead. Of those who did try to divide, a high proportion could not divide their circumference by 5 accurately, with problems involving the decimal point frequently seen. Overall, this question was poorly done, with only 20% of students scoring more than 1 mark and a high number of non-attempts seen.

Only the most able students could get to an answer of 7 in the Soft Mild cell in the two-way table in **part c**. Very few students gave their final answer as a probability. The majority of students could make some progress, usually with working out 75% of 120, but some of these students placed 90 in the wrong cell, leading to their next answers being incorrect. Some worked out a quarter of 120 is 40 but put that in the wrong cell, which then led them to put 97 where they should have put 90

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**8362/2- Paper 2****Section A**

In **question 1** the vast majority of students thought that the plan view was option 1, with only about one third of the students choosing the correct option.

**Question 2** was answered correctly by about 60% of the students. Errors seen included writing three thousand and seven instead of three hundred and seven thousand. A small number of students thought that the first digit represented two hundred thousand.

Just under half of the students knew to find the difference between 0.5 and each of the values in **question 3**. A small number of these students made arithmetical errors despite this being a calculator paper. The least able students just rounded each value to 1 decimal place.

**Question 4** was poorly attempted, with over half of the students failing to gain any credit.  $\pi$  was often squared instead of squaring 2.3. Units were frequently omitted and if units were added they were often just cm

**Question 5** was attempted quite well, with 60% gaining both marks. The majority of students could plot the midpoint, but some wrote the coordinates the wrong way round. The least able students plotted a point that was not on the line.

Working out a mean from a frequency distribution is always challenging, so **question 6** was not done well. However, about 15% of the students gained full marks, with another 20% gaining a mark for their correct fx column. Those who calculated the fx column often divided the total by 3 or ignored their calculation altogether.

**Section B****Question 7 School office**

Many students found **part a** difficult to understand, with a large number dividing 29 by 7 instead of 8 for the 'Best book' bags. Students usually then worked out the cost correctly for their number of bags bought with this offer. For 'Bags and Stuff', a significant number of students thought that the delivery charge was per book rather than for the whole order. Only about 20% of the students gained at least 4 marks out of the 5.

In **part b** very few students knew the formula for volume of a cylinder. This formula is not given so must be memorised. Students could still gain some credit for working out the proportion of their cylinder that would be filled, and for comparing with the number of litres that would flow in 6 minutes. However, the whole question was poorly attempted, with the average mark being 1 out of 6 and with about 60% failing to score any marks.

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**Question 8 Lifeguard**

About half of the students could start to convert Fahrenheit to Celsius using the formula in **part a** but mistakes were often made with the application of the fraction. Those who worked out that 9 am gave a temperature of 26.6 usually chose this as their answer, but a small number chose 10 am, presumably thinking that 26.6 is not greater than 26. The least able ignored the fraction so had 8 am as 47° C which is already above 26

**Part b** was answered a little better, though some got to 3.6 and then said 3 lifeguards were needed. The most common error was to just split adults and children in a random way, ignoring the ratio, eg to 60:30 or 50:40 and then work out the number of lifeguards needed. Another error was to divide 90 by 3 and by 2 separately.

**Question 9 Hedgehogs**

There was a lot of information to understand in **part a**, and the majority of students struggled with the different time frames. They mixed up monthly and yearly costs, so could make little progress. Fewer than 10% of the students could get to the final correct answer and about a quarter of the students failed to gain any credit. Students often worked out the increase by a fraction correctly, although a small number changed it to a decimal and rounded it to 0.16

The new vets' cost was often added to the old vets' cost and the yearly electricity increase was often added to the old monthly cost.

In **part b** less than 10% of students could work out the correct answer to this relatively standard compound interest question. Very few students could deal with an interest rate of 1.2%, with many writing it as 1.12

Those who could use it correctly often only worked out one year or added the same amount both years. The majority of students just multiplied 245000 by 1.2 or 2.4

**Part c** asked for a description of the relationship between the two sets of data. This was answered quite well, with about 40% of students giving a suitable comment. Common errors included mixing up warmer and colder, eg stating that the warmer it is the more hedgehogs were rescued. A significant number just stated that it was positive or negative correlation which was not sufficient.

**Part d** was a very standard scatter diagram which required a line of best fit, some readings from it and a subtraction of their values. However very few students seem to realise that they must draw a line of best fit in order to make any estimates from a scatter graph. 80% of students gained no credit in this question. If a line is drawn then students can gain credit for readings from it even if they are inaccurate, but without a line of best fit no progress is made.

**Question 10 Housework**

**Part a** was a relatively straightforward question, with 3 marks available for working out the number of washes gained with each pack. The majority of students could get this far but struggled to compare the difference as a percentage increase. Some worked out 32% of the liquid number of washes instead of the powder number of washes and some just said the difference is 16 which is 16% so less than 32

The area of a circle was poorly attempted in **part b**, with few using the correct formula. Those who did use the area formula often didn't divide by 4. The majority gained some credit for dividing their

area by 15, but a small number squared 15 first. Those who divided by 15 usually rounded up to a whole number of bottles, but a small number of students used their decimal number of bottles. The least able just added the given lengths together, with no attempt at using a formula involving  $\pi$

There were some very good answers for **part c**, with about 20% of students gaining 6 marks. The majority included the correct units in their answers. Almost all of the students changed half a pint to ml and worked in ml throughout. A common error was to take the 284 ml conversion from 700 to get the amount of vinegar or to have 284 ml vinegar and then the difference from 700ml for water.

### **Mark Ranges and Award of Grades**

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