2016 Notes from the Marking Centre – Mathematics General 2

Ouestion 26

Candidates showed strength in these areas:

- substitution into a familiar formula given on the formula sheet (part a)
- calculating an amount of fuel with simple use of rates (part c)
- applying Pythagoras correctly (part d).

Candidates need to improve in these areas:

- simplifying algebraic fractions involving indices (part b)
- calculating the annual leave pay and not just the leave loading (part e)
- using a tax table and given information to justify if a refund would occur after calculating the tax payable (part f).

Ouestion 27

Candidates showed strength in these areas:

- using a table with repayment schedules to calculate interest and amounts paid (part d)
- calculating the difference in longitude (part e i)
- showing a conversion from degrees in longitude to hours (part e ii).

Candidates need to improve in these areas:

- explaining the difference between different types of car insurance (part a)
- calculating the population mean as the mean of all the possible sample means (part b)
- estimating the measures of location from a cumulative frequency polygon (part c).

Question 28

Candidates showed strength in these areas:

- calculating the total cost involved in running an electrical appliance (part b)
- knowing that the maximum value in probability is 1 (part c ii)
- calculating the volume of a cylinder (part e).

Candidates need to improve in these areas:

- using a probability tree diagram to solve a problem involving a two stage event (part b)
- calculating the contributions per period using a given table of futures values (part d)
- solving problems using volume formulae in a practical context (part e ii).

Ouestion 29

Candidates showed strength in these areas:

- calculating familiar probability coin tossing (part a i)
- calculating the median from a table of values (part c)
- reading information from a linear graph (part e).

Candidates need to improve in these areas:

- interpreting exponential graphs in a practical context (part b)
- calculating a correlation coefficient (part d)
- explaining the meaning of gradient in a given context (part e ii).

Question 30

Candidates showed strength in these areas:

- calculating the area of simple composite figures (part c)
- applying the sine rule or cosine rule to find the side length of a triangle (part c)
- substitution of given data into a provided formula (part d i).

Candidates need to improve in these areas:

- performing conversions involving units related to area and volume (part a)
- calculating the speed required to download a file (part b)
- solving linear simultaneous equations involving decimals and less familiar pronumerals (part d).