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KU   RE

2500/402

MATHEMATICS
STANDARD GRADE
Foundation Level
Paper 2

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day   Month   Year   Scottish candidate number   Number of seat

1   **You may use a calculator.**

2   Answer as many questions as you can.

3   Write your working and answers in the spaces provided. Additional space is provided at the end of this question-answer book for use if required. If you use this space, write clearly the number of the question involved.

4   Full credit will be given only where the solution contains appropriate working.

5   Before leaving the examination room you must give this book to the Invigilator. If you do not, you may lose all the marks for this paper.

SQA

1. Caitlin bought a caravan for £32 300.

She sold it two years later, making a loss of £2460.

For how much did Caitlin sell her caravan?

WORKING
ANSWER £

2

2. A box of chocolates is in the shape of a cuboid.

The cuboid is 9 centimetres long, 6 centimetres broad and 4 centimetres high.

4 cm

6 cm

9 cm

Find the volume of the box.

WORKING	
ANSWER	cubic centimetres

2

3. Draw this shape on the grid below.

Make each of its lines half as long.

4

4. Emma is playing with straws which she has cut to the sizes shown below.

12 cm   10 cm   8 cm   6 cm   4 cm   3 cm   1 cm

She uses four of the straws to make this rectangle.

6 cm

4 cm

(*a*) Calculate the area of this rectangle.

WORKING	
ANSWER	square centimetres

2

(*b*) Emma notices that she can use four more straws to make a different rectangle with the **same area** as the one above.

Which four straws does Emma use?

WORKING	
ANSWER	

2

5. The shape below is called a decagon.

The angles at the centre of this decagon are equal.

Calculate the size of the shaded angle.
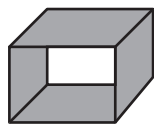
WORKING

ANSWER		°

3

6. A furniture company makes wooden shelf units in different sizes.

Some of the sizes are shown below.

Shelf size 1   Shelf size 2   Shelf size 3
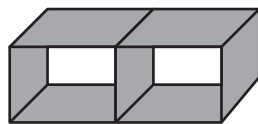
4 pieces of wood   7 pieces of wood
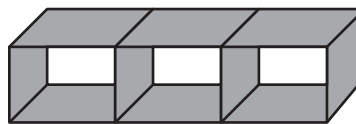
(*a*)   Complete this table.

Shelf size	1	2	3	4	5	6		13
Number of pieces of wood	4	7						

WORKING

4

(*b*)   Write down a rule for finding the number of pieces of wood if you know the shelf size.

RULE

2

7. This is a plan of Gordon's kitchen.
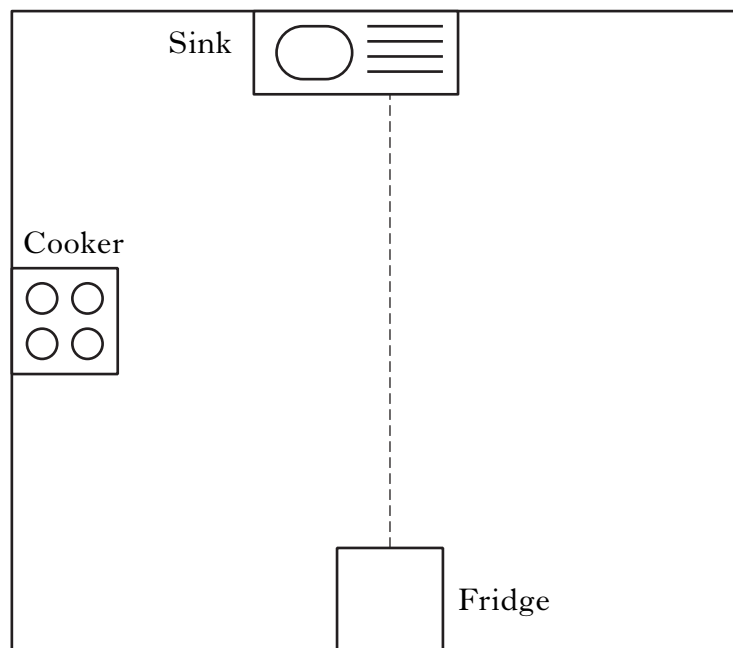
(*a*) A broken line has been drawn on the plan to show the distance from the fridge to the sink.

Measure this distance.

ANSWER	centimetres

1

(*b*) The scale of the plan is **1 centimetre represents 50 centimetres**.

Find the actual distance from the fridge to the sink in centimetres.

WORKING

ANSWER	centimetres

2

(*c*) Write down the actual distance from the fridge to the sink **in metres**.

ANSWER	metres

1

8. The table below can be used to find the cost of 1 year's road tax based on the CO_2 emissions of a car.

Band	CO_2 Emissions (g/km)	1 year's road tax
A	Up to 100	Not Applicable
B	101 – 120	£35
C	121 – 150	£120
D	151 – 165	£145
E	166 – 185	£170
F	Over 185	£210

(*a*) Write down the cost of 1 year's road tax for a car with CO_2 emissions of 160 g/km.

ANSWER	£

1

(*b*) Mr and Mrs Dunbar each have the same type of car and their total bill for 1 year's road tax is £340.

In which **Band** are their cars?

WORKING	
ANSWER	

3

9. Miss Sweeney asks each pupil in her class to record their shoe size on a piece of paper.

She then asks her class to make up a frequency table showing this information.

The frequency table is shown below.

Shoe size	Tally	Frequency
2	|	1
3	||	2
4	||||	5
5	|||| ||	7
6	|||	3
7	||	2

(a) Which shoe size is the mode?

ANSWER

1

At the end of the lesson Miss Sweeney collects the pieces of paper but drops two of them on the way back to her desk without noticing.

The pieces of paper that Miss Sweeney still has in her hand are shown below.

| 2 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 |

| 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 7 |

(b) Which two shoe sizes are written on the pieces of paper that Miss Sweeney dropped?

WORKING

ANSWER

2

10. A Student Travel Card offers a 35% discount on all rail travel.

The return train fare from Ayr to Glasgow is £11.

(*a*) Carol has a Student Travel Card.

Calculate the discount she will get on the return train fare from Ayr to Glasgow.

WORKING

ANSWER | £

2

(*b*) How much will Carol pay for her return train fare from Ayr to Glasgow?

WORKING

ANSWER | £

2

11. Puzzles are made using circles and squares.

The numbers in the two circles must add to give the number in the square.

$$\text{5} - \boxed{8} - \text{3}$$

(*a*) What number does T represent?

$$\text{2} - \boxed{11} - \text{T}$$

ANSWER	T =

1

(*b*) What numbers do A, B and C represent?

WORKING

ANSWER	A =
	B =
	C =

3

12. Mike bought a car using the Hire Purchase agreement shown.

HP PRICE

Deposit of £750

and

36 payments of £150

How much did Mike pay for his car?

WORKING	
ANSWER	£

4

13. Dolly the Sheep became famous when she was cloned at the Roslin Institute in Edinburgh.

She was born on the 5th July 1996.

She died on the 14th February 2003.

What age was she when she died?

WORKING

ANSWER _____ years old

3

14. Jafar is a joiner.

He fits doors in houses.

He uses this rule to work out how much to charge.

| **Cost in pounds = 35 + (Number of doors × 28)** |

How much does Jafar charge to fit 8 doors?

WORKING	
ANSWER	£

3

15. A mother makes a garden toy for her children to climb through.

A sketch of the front of the toy is shown below.

It is made by cutting a circle from a square.

30 cm ⟵

30 cm ⟶

⟵ 150 cm ⟶

Calculate the **radius** of the circle.

WORKING

ANSWER   centimetres

4