A

AQA

Surname _____

Other Names _____

Centre Number _____

Candidate Number _____

Candidate Signature _____

I declare this is my own work.

Functional Skills Level 1

MATHEMATICS

Paper 2 Calculator

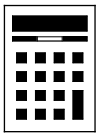
8361/2

Time allowed: 1 hour 30 minutes

At the top of the page, write your surname and other names, your centre number, your candidate number and add your signature.

[Turn over]

For this paper you must have:
- **a calculator**
- **mathematical instruments.**



INSTRUCTIONS

- **Use black ink or black ball-point pen. Draw diagrams in pencil.**
- **Answer ALL questions.**
- **You must answer the questions in the spaces provided. Do not write on blank pages.**
- **If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).**
- **Do all rough work in this book. Cross through any work you do not want to be marked.**
- **State the units of your answer where appropriate.**

INFORMATION

- **The marks for questions are shown in brackets.**
- **The maximum mark for this paper is 60.**
- **You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer book.**

ADVICE

In all calculations, show clearly how you work out your answer.

DO NOT TURN OVER UNTIL TOLD TO DO SO

SECTION A

Answer ALL questions in the spaces provided.

1 Write these numbers in order of size, starting with the SMALLEST. [1 mark]

67 492 351 968 472 410 92 836

_____

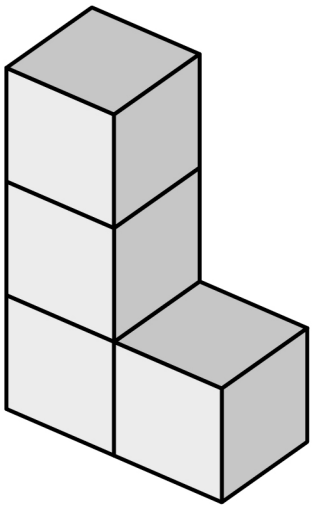
_____

_____

Answer

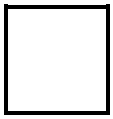
_____ , _____ , _____ , _____

2 This shape is made using four cubes.

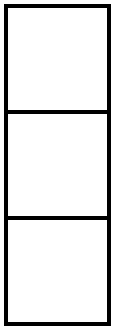


Circle the letter of the plan view. [1 mark]

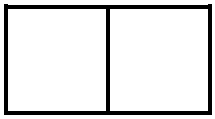
A



B



C



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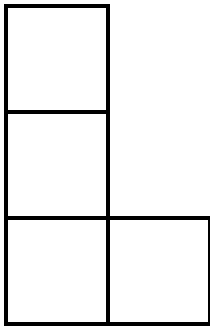


[Turn over]

3 Round 17.834 to 2 decimal places. [1 mark]

Answer _____

4 Circle the fraction equal to 0.75 [1 mark]

$\frac{1}{4}$ $\frac{3}{4}$ $\frac{5}{7}$ $\frac{7}{5}$

5 Work out $24^2 + 37^2$ [2 marks]

Answer _____

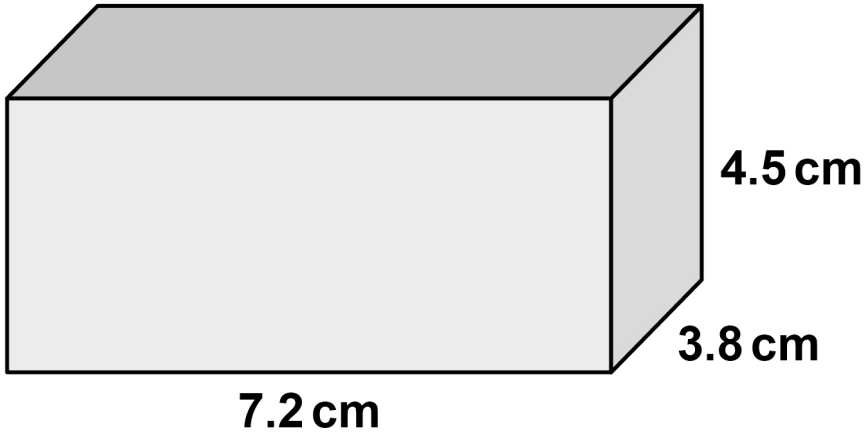
6 **Increase 78 by 35% [3 marks]**

Answer _____

[Turn over]

7 **Work out the volume of this cuboid.**

State the units of your answer. [3 marks]



Answer _____

12

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[Turn over]

SECTION B

Answer ALL questions in the spaces provided.

8 SCHOOL TRIPS

Mr Nagah and Miss Burns are geography teachers.

They are planning a trip for 34 students to a field centre.

8 (a) Mr Nagah and Miss Burns will go on the trip.

There must be at least 1 teacher for every 8 students on the trip.

How many MORE teachers are needed?

You MUST show your working. [3 marks]

Answer _____

[Turn over]

8 (b) Mr Nagah is working out the time they should leave school for the field centre.

He makes these notes.

> **It will take one and a half hours to get to the field centre**
>
> **The students will need 20 minutes to unpack**
>
> **We will then have 45 minutes for lunch**
>
> **We must be ready for our first activity at 1 pm**

Work out the latest time they can set off.
[4 marks]

Answer _____

[Turn over]

8 (c) **The total cost of the trip is £3265**

The geography department pays 20% of this cost.

The rest of the cost is shared equally by the 34 students.

Work out how much each student has to pay.

Give your answer to the nearest pound. [5 marks]

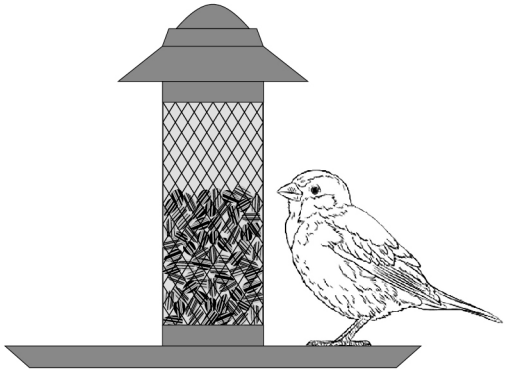
Answer £ _____

[Turn over]

12

9 GARDEN BIRDS

Simon has a bird feeder in his garden.

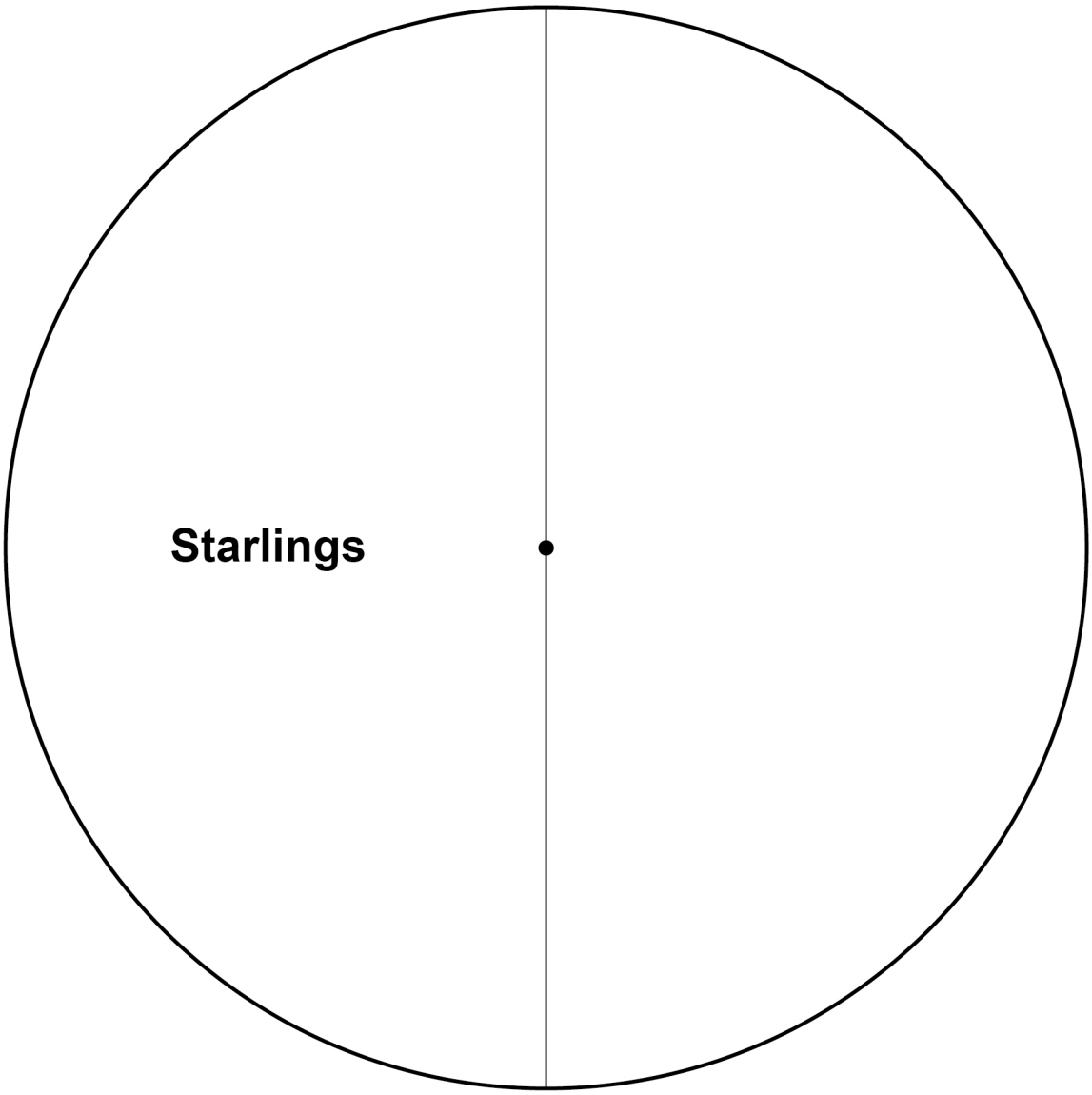


9 (a) On Monday Simon records the types of birds that visit his bird feeder.

He uses this table to work out the angles needed for a pie chart.

	Number	Angle (degrees)
Starlings	18	
Sparrows	9	
Blackbirds	6	
Others	3	
	Total = 36	

Complete the pie chart. [4 marks]



[Turn over]

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9 (b) **Simon takes a photo of each of the 36 birds that visit the bird feeder on Monday.**

He decides to choose one of the photos at random.

Simon says,

"The probability that the photo is of a sparrow is MORE THAN $\frac{1}{3}$"

Is Simon correct?

You MUST show your working. [2 marks]

9 (c) **Simon counts the birds he sees at the feeder each day for the rest of the week.**

Day	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Number of birds	36	25	30	42	44	26	56

In the same week last year, the mean number of birds per day was 39

This year, has the mean increased, decreased or stayed the same?

Tick (✓) ONE box.

☐ **increased**

☐ **decreased**

☐ **stayed the same**

Show working to support your answer. [4 marks]

[Turn over]

9 (d) **Each day, Simon puts 125 GRAMS of bird seed in the bird feeder.**

He says,

"A 2.8 KILOGRAM bag of seed will last for MORE THAN 3 weeks."

Is Simon correct?

You MUST show your working. [4 marks]

[Turn over]

14

10 PHOTOGRAPHER

Liam is a photographer.

10 (a) Liam is asked to take photos at Molly's party.

He uses this formula to work out his fee.

Fee = £40 + number of photos × £3.75

Molly wants 18 photos.

She gives Liam six £20 notes.

How much change should she get? [4 marks]

Answer £ _____

[Turn over]

10 (b) **Liam also takes school photos.**

He sells the photos in four different pack sizes, A, B, C and D.

Liam kept a tally of the packs he sold one day.

Pack	Tally	Frequency
A	𝍸 𝍸 𝍸 𝍸 ||	
B	𝍸 ||||	
C	𝍸 |	
D	𝍸 𝍸 ||||	

Liam says,

“I sold MORE THAN four times as many of pack A as I did of pack C.”

Is he correct?

You MUST show your working. [3 marks]

[Turn over]

10 (c) **Liam wants to arrange six photos on a display board in his studio.**

The board is a rectangle with width 120 cm and height 140 cm

He has

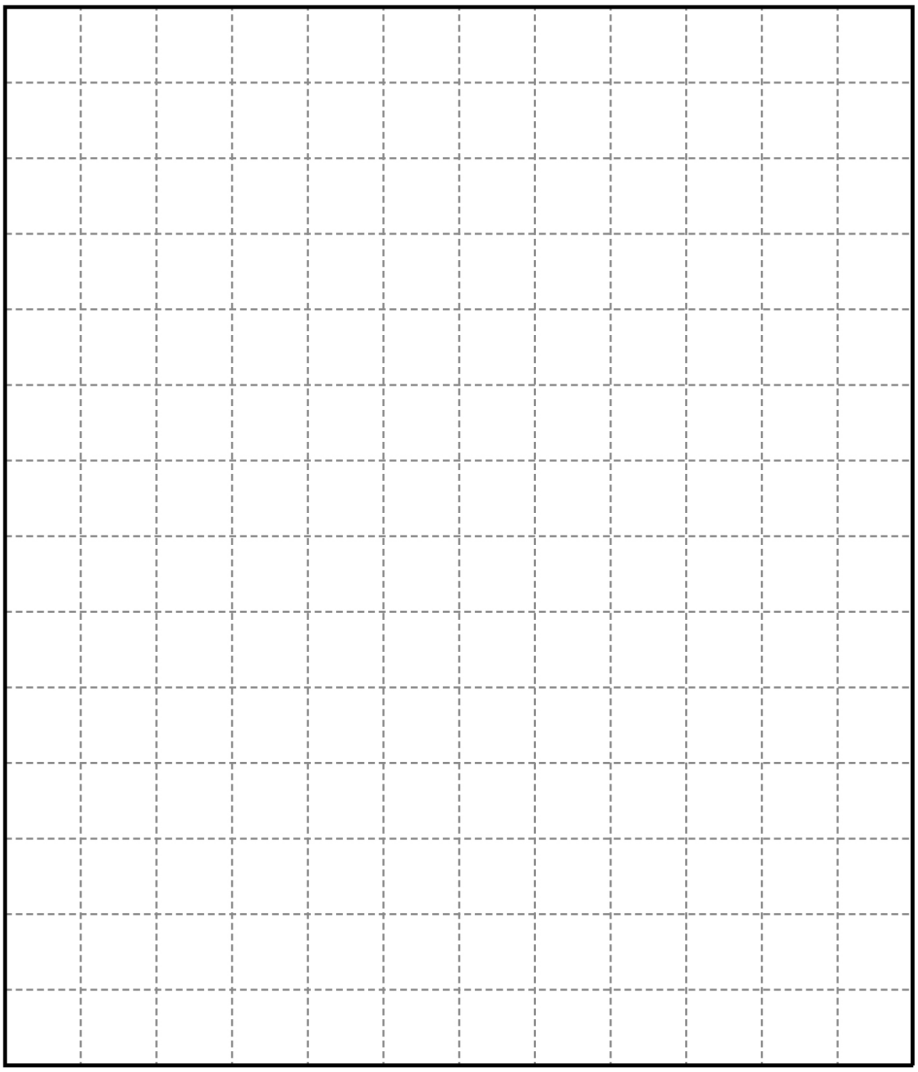
- **one photo of width 60 cm and height 60 cm**
- **two photos each of width 30 cm and height 40 cm**
- **three photos each of width 25 cm and height 15 cm**

There must be a space of at least 10 cm between photos.

The grid is a scale drawing of the display board.

Use the grid, on the opposite page, to show how Liam could arrange the photos. [5 marks]

SCALE: ▢ **represents a 10 cm by 10 cm square**



[Turn over]

12

11 PATCHWORK

Daisy is making a cushion.

The front of the cushion has a patchwork design made up of 16 square patches.

The back of the cushion is a single piece of fabric.

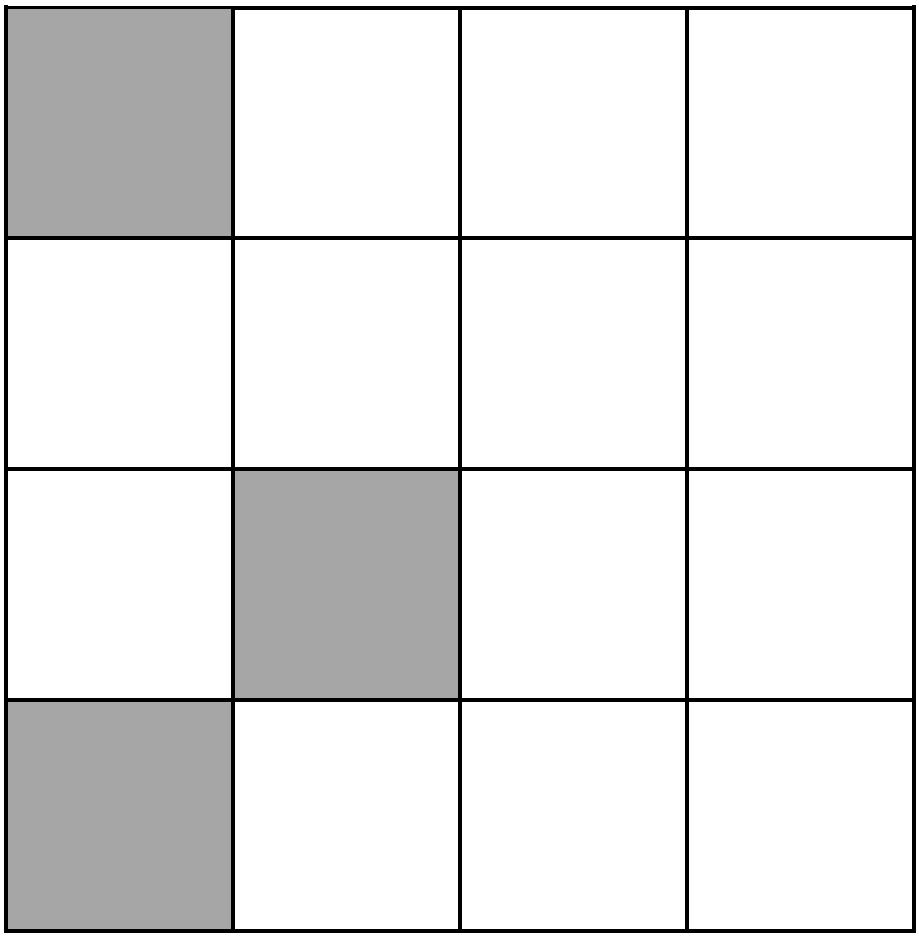
11 (a) Daisy starts to make a sketch of her design.

6 of the squares will be grey.

The rest of the squares will be white.

She has shaded 3 of the 6 grey squares.

On the opposite page, shade 3 MORE squares so that the design has AT LEAST one line of symmetry. [2 marks]



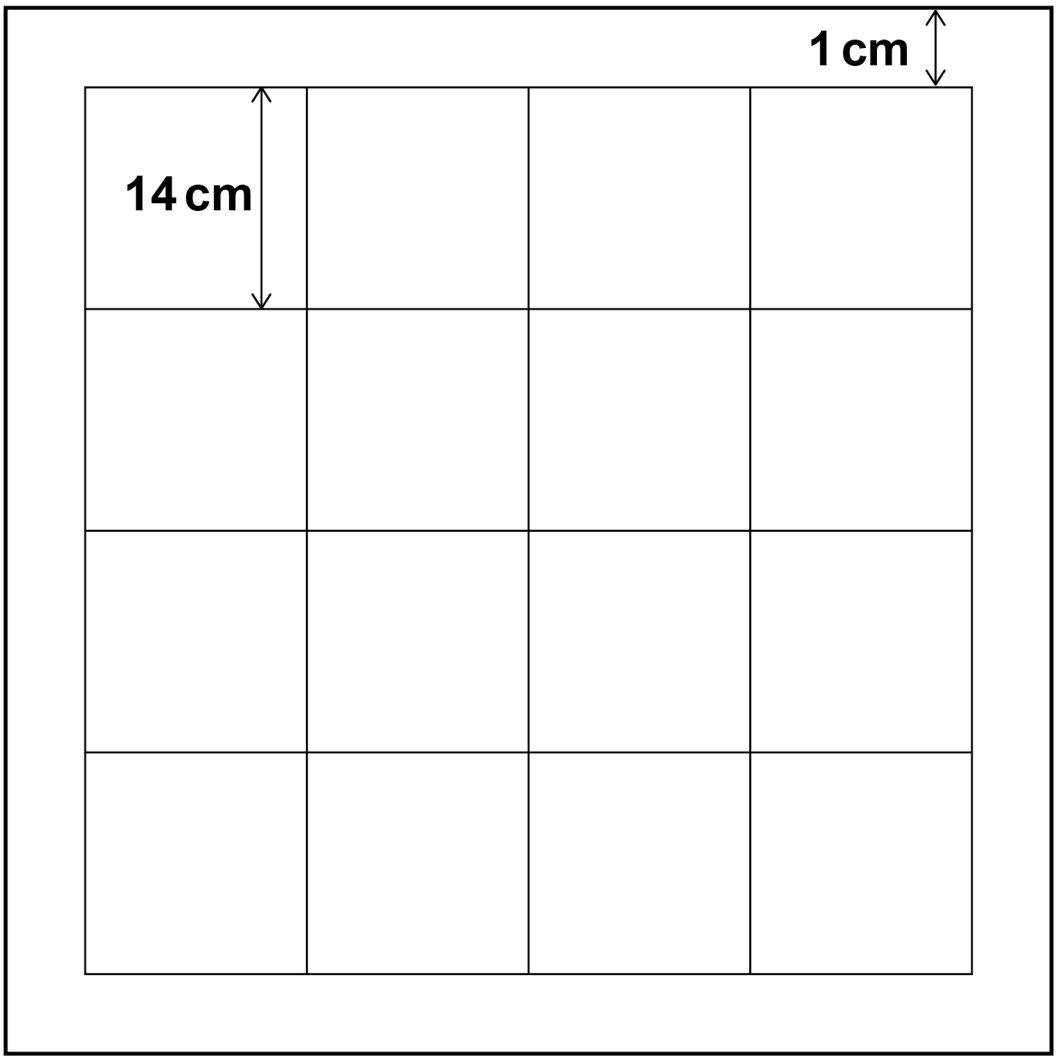
[Turn over]

11 (b) **Each of Daisy's square patches measures 14 cm by 14 cm**

There is a 1 cm border around the patchwork.

The diagram shows the front of Daisy's cushion.

The diagram is not drawn accurately.



The front and back of the cushion are the same size.

Daisy has a SQUARE piece of fabric with an area of 3600 cm^2

She wants to cut the back for her cushion from this piece of fabric.

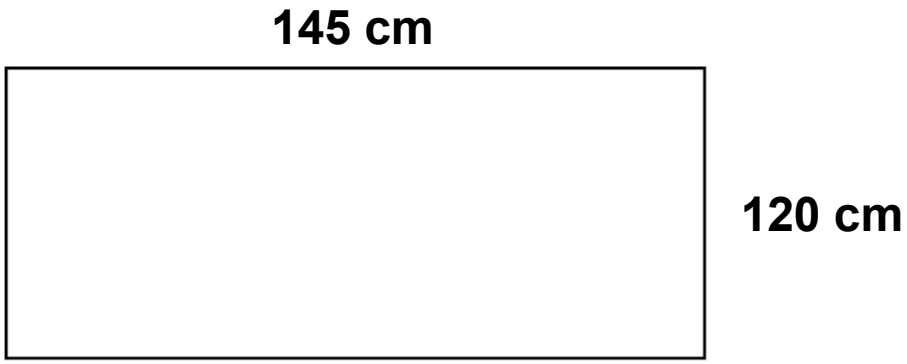
Is this piece of fabric big enough?

You MUST show your working. [4 marks]

11(c) **Daisy also sews a patchwork quilt.**

The quilt is a rectangle.

The diagram is not drawn accurately.



Daisy wants to put cord around the outside edges of the quilt.

She has 3.6 METRES of cord.

How much MORE cord does Daisy need?

State the units of your answer. [4 marks]

Answer _____

END OF QUESTIONS

10

Additional page, if required.
Write the question numbers in the left-hand margin.

Additional page, if required.

Write the question numbers in the left-hand margin.

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For Examiner's Use	
Question	Mark
1–7	
8	
9	
10	
11	
TOTAL	

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