

Please write clearly in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

I declare this is my own work.

Functional Skills Level 2

MATHEMATICS

Paper 2 Calculator

Tuesday 25 February 2020

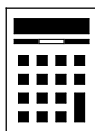
Afternoon

Time allowed: 1 hour 30 minutes

Materials

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 outside the box around each page or 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.
- If your calculator does not have a π button, take the value of π to be 3.142

Advice

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

For Examiner's Use

Question	Mark
1–5	
6	
7	
8	
9	
TOTAL	



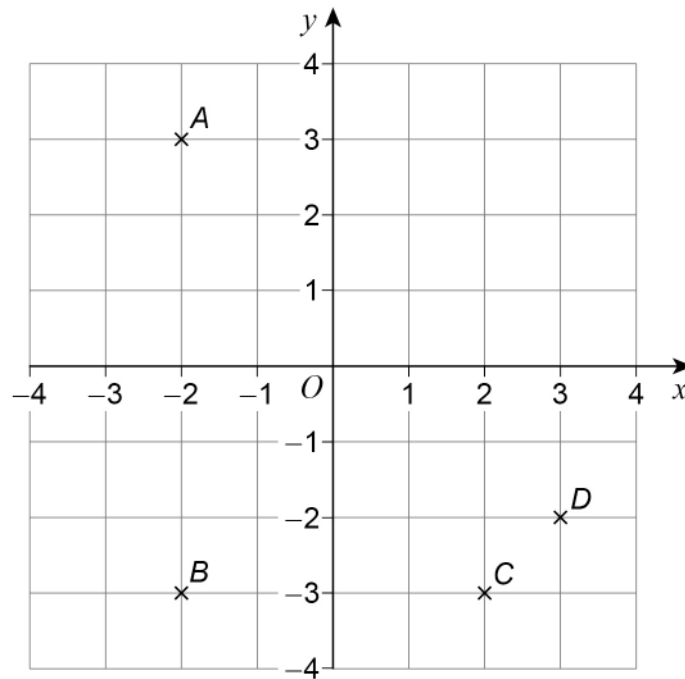
M A R 2 0 8 3 6 2 2 0 1

IB/M/Mar20/E7

8362/2
QAN 603/4258/4

Section AAnswer **all** questions in the spaces provided.

- 1** Which point has the coordinates $(-2, 3)$?



Circle your answer.

[1 mark]

A

B

C

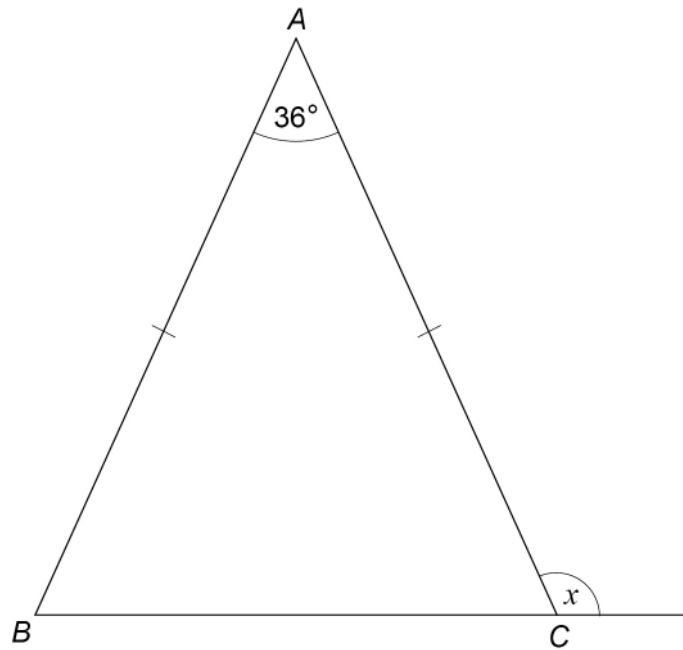
D



2

Here is an isosceles triangle.

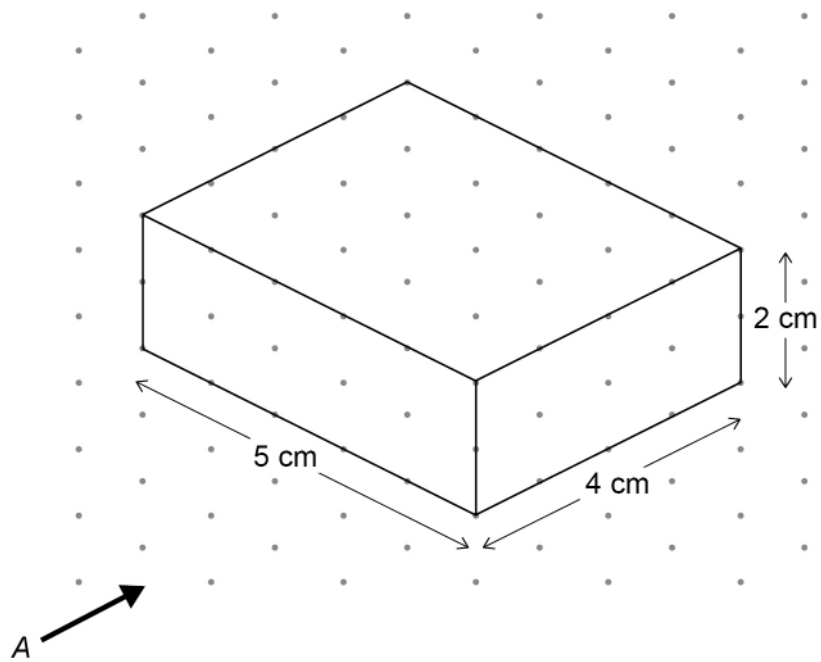
$AB = AC$

Work out the size of angle x .**[3 marks]**

Answer _____°

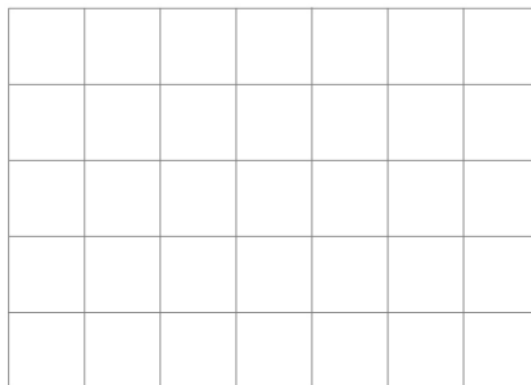
Turn over ►

- 3 A cuboid is shown below.



- 3 (a) Draw the elevation of the cuboid in the direction of the arrow.

[1 mark]



3 (b) Work out the total surface area of the cuboid.

[3 marks]

Answer _____ cm^2

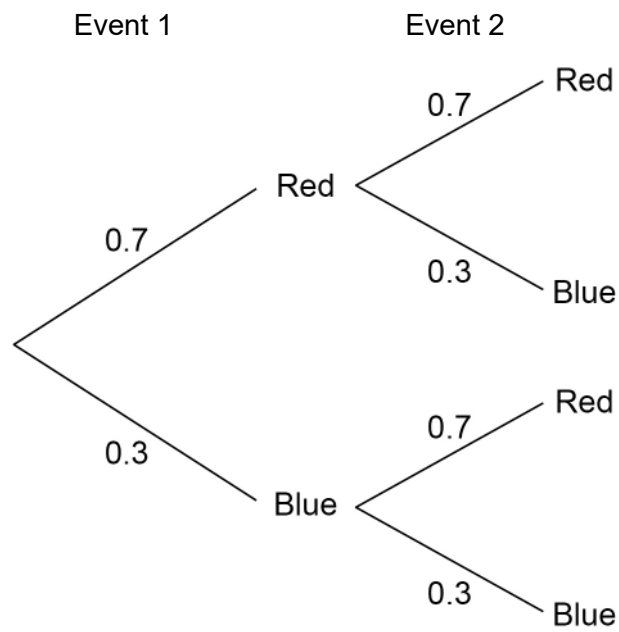
Turn over for the next question

Turn over ►



4

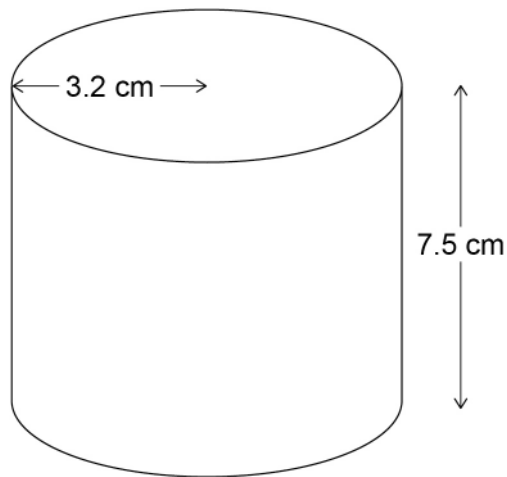
Here is a tree diagram.

Work out the probability of Red in Event 1 **and** Red in Event 2**[2 marks]**

Answer _____



- 5** A cylinder has radius 3.2 cm and height 7.5 cm



Work out the volume of the cylinder.

[2 marks]

Answer _____ cm^3

12

Turn over for Section B

Turn over ►



Section B

Answer **all** questions in the spaces provided.

6 Cycle race

Paul and Fran want to enter a 60 km cycle race.

- 6 (a)** They look at the reviews of two races, A and B, from last year.
Each review gives a score out of 5 stars to show how good the race was.
Here is some information about the review scores for **Race A**.

Mean	4.1 stars
Median	4 stars
Range	3 stars

The frequency table shows the review scores of **Race B**.

Review Score (stars)	Frequency
1	0
2	1
3	1
4	4
5	6

They enter the race with the higher average review score.

Which race do they enter?

You **must** show your working.

[4 marks]



- 6 (b)** Fran wants to buy a new bike for the race.
She sees this offer.

Racing bike
£708 including VAT at 20%
SPECIAL OFFER
WE PAY THE VAT

Fran has £600 to spend.

Can she afford the bike?

You **must** show your working.

[3 marks]

Question 6 continues on the next page

Turn over ►



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outside the
box*

6 (c)

Paul and Fran start the race at the same time.

Fran cycles the 60 km at an average speed of 15 **miles** per hour.

Fran completes the race and waits for Paul to finish.

Paul finishes the race in 167 minutes.

Does Fran wait for **more than** 10 minutes?

Use 1 mile = 1.6 km

You **must** show your working.

[4 marks]

[illegible]

7 Supermarket

Lucas is going shopping at a supermarket.

- 7 (a)** Lucas has a budget of £50 per week for food.
He has already spent £12.50 on takeaway meals.

What fraction of his budget does he have left?

[2 marks]

Answer _____

Question 7 continues on the next page

Turn over ►



7 (b)



He reads the label.

Sugar content	26.4 g per 100 g
Maximum recommended daily amount (MRDA) of sugar	30 g

Lucas eats 2 biscuits.

Work out the percentage of the MRDA of sugar in the 2 biscuits.

[4 marks]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Answer	%
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A circular fuel gauge with a needle pointing to 24%. The gauge has markings from E (Empty) to F (Full). A fuel pump icon is at the bottom.

[4 marks]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

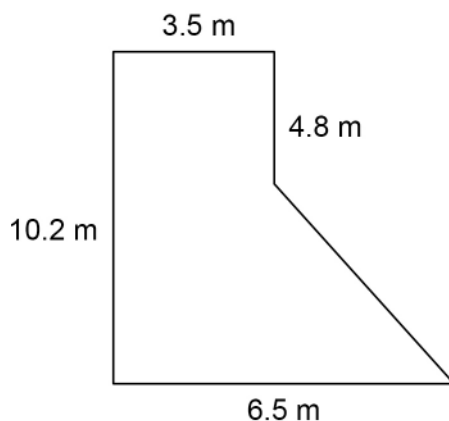
Answer £

10

8 Driveway

Meg owns a company that builds concrete driveways.

- 8 (a)** Here is a sketch of a plan of a driveway made from a rectangle and a triangle.



Not drawn
accurately

Meg charges £120 per square metre to construct the driveway.

Work out the total amount she charges for the driveway.

[4 marks]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Answer £



[4 marks]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Answer _____

Turn over ►



[5 marks]

[illegible]

Answer



9 Apartment

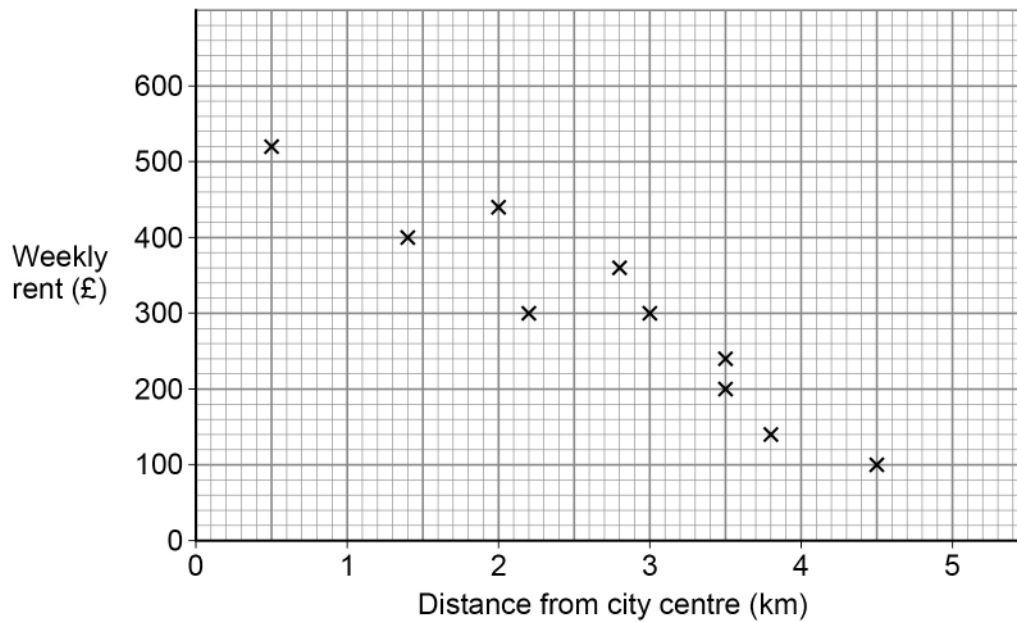
Pete wants to rent an apartment near Norwich city centre.

9 (a) He records information about 10 apartments on a scatter diagram.

The diagram shows

the distance from the city centre in km

the weekly rent in £



The table shows extra data about two other apartments.

Distance from city centre (km)	Weekly rent (£)
2	250
3.2	180

Pete rents an apartment for £280 per week.

Use the scatter diagram **with the extra data** to

estimate the distance from the city centre to the apartment.

You **must** show your working, which should be on the diagram.

[4 marks]

Answer _____

Question 9 continues on the next page

Turn over ►



[6 marks]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Answer £



9 (c) Pete wants to hide the wires from his TV.

Wires can be hidden in plastic trunking.

Trunking can be cut to any length.

Pete needs three pieces of trunking measuring

$1\frac{1}{2}$ metres

$2\frac{1}{4}$ metres

90 cm

Pete has 15 feet of trunking.

Is this enough?

Use 1 foot = 12 inches

Use 1 inch = 2.5 cm

[4 marks]

14

END OF QUESTIONS



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ANSWER IN THE SPACES PROVIDED**



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2 4



2 0 3 6 8 3 6 2 / 2

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