

Year 9

Mathematics

Foundation: No calculator allowed

Time allowed: 45 minutes

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
Teacher						

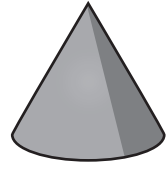
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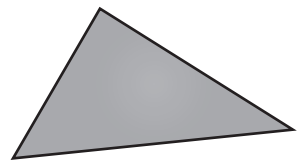
1

Match the labels to the shapes.

Triangle



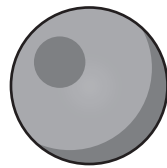
Tetrahedon



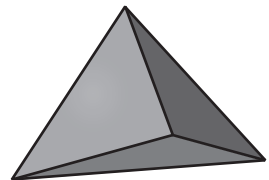
Sphere



Cone

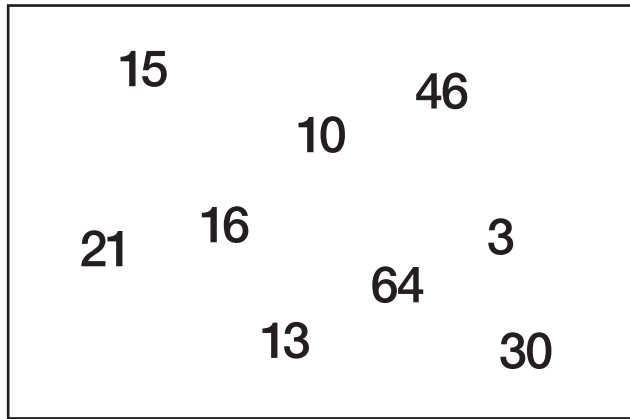


Rectangle



2 marks

2



From the numbers in the rectangle,

write down a multiple of 4

1 mark

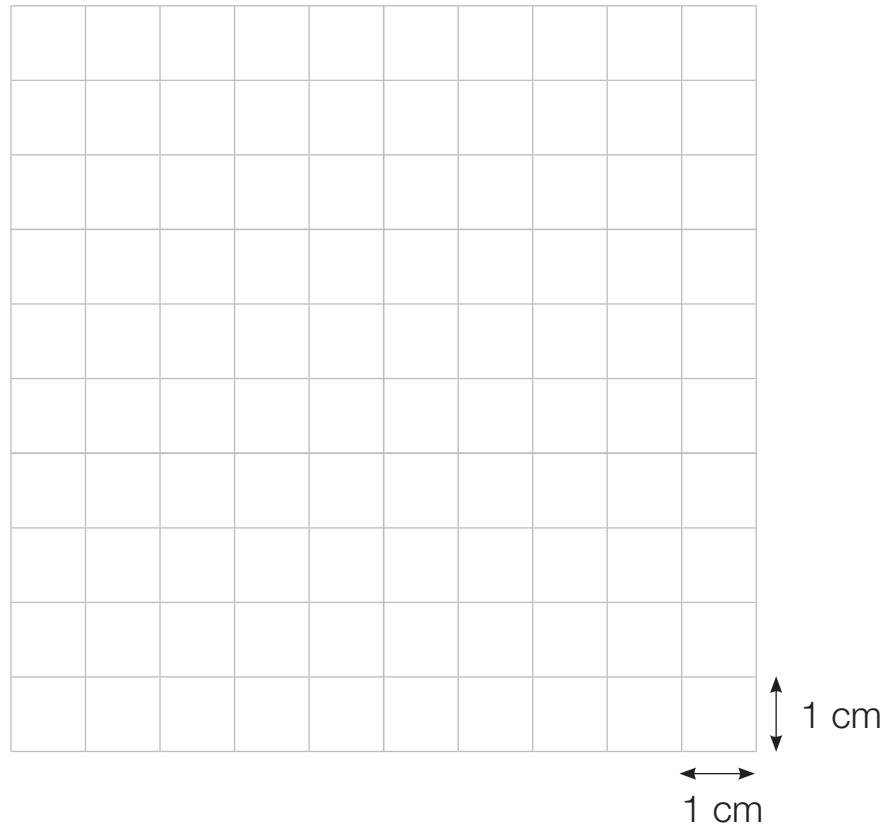
write down a prime number.

1 mark

3

A rectangle is 40 cm long and 30 cm wide.

Use a scale of 1 cm to represent 10 cm to draw a scale diagram of the rectangle on the grid.



2 marks

4

Circle all the values of x that satisfy the inequality $x \geq 2$

0

-4

2

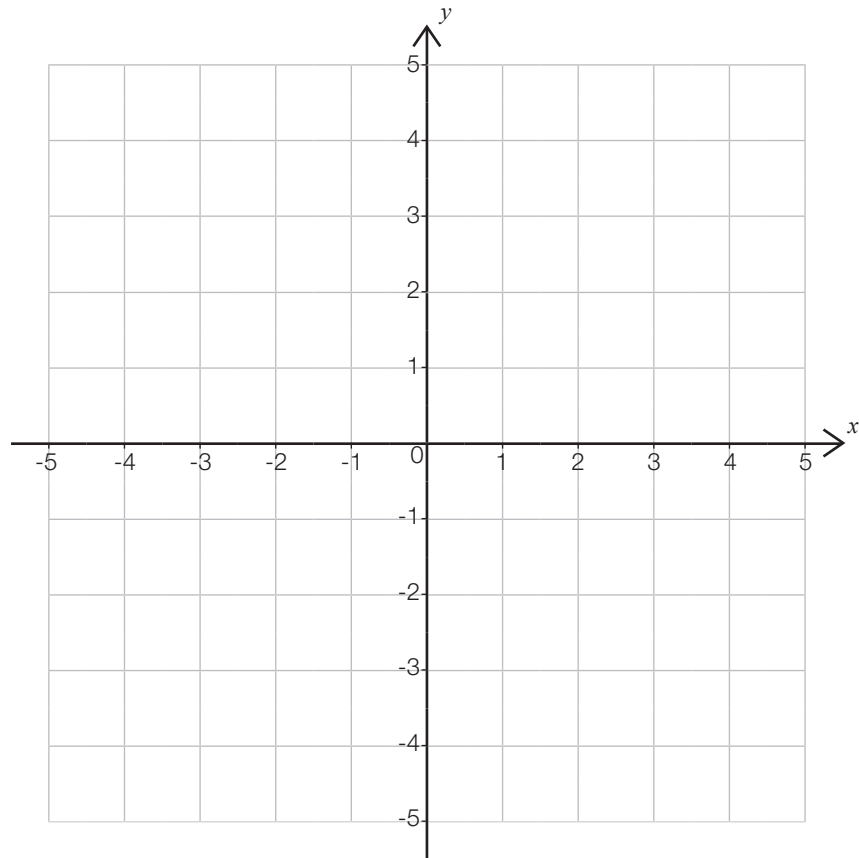
-1

6

5

2 marks

5



Plot the points $(-1, 4)$, $(-1, -3)$ and $(-1, 0)$ on the grid.

2 marks

The three points lie on a straight line.

Write down the equation of the line.

1 mark

6

Show that

$$\frac{1}{3} \text{ of } 18 = 25\% \text{ of } 24$$

2 marks**7**

Solve the equations.

$$p + 2 = 11$$

$$p =$$

1 mark

$$15 = 3x$$

$$x =$$

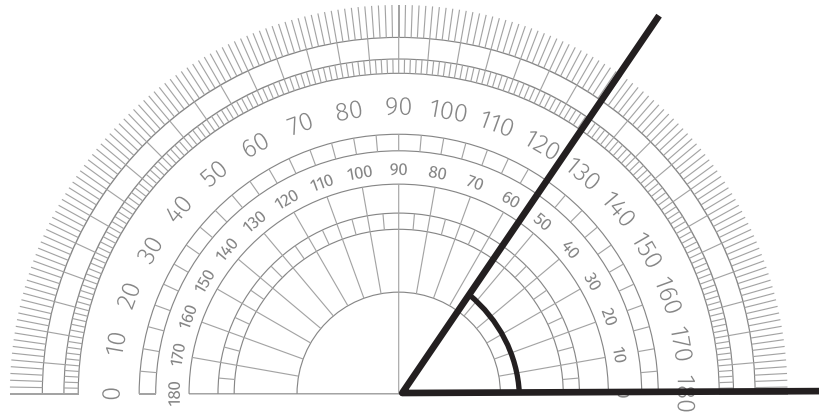
1 mark

$$2y + 7 = 19$$

$$y =$$

2 marks

8

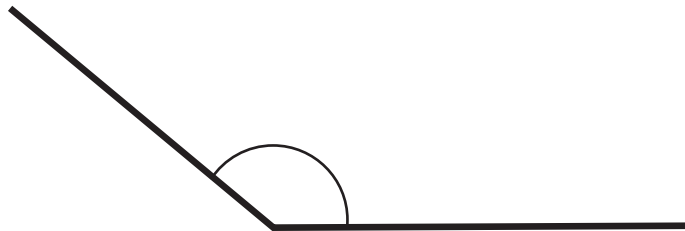


Amy thinks that the angle measures 125° .

Explain what Amy has done wrong.

1 mark

Measure the angle.

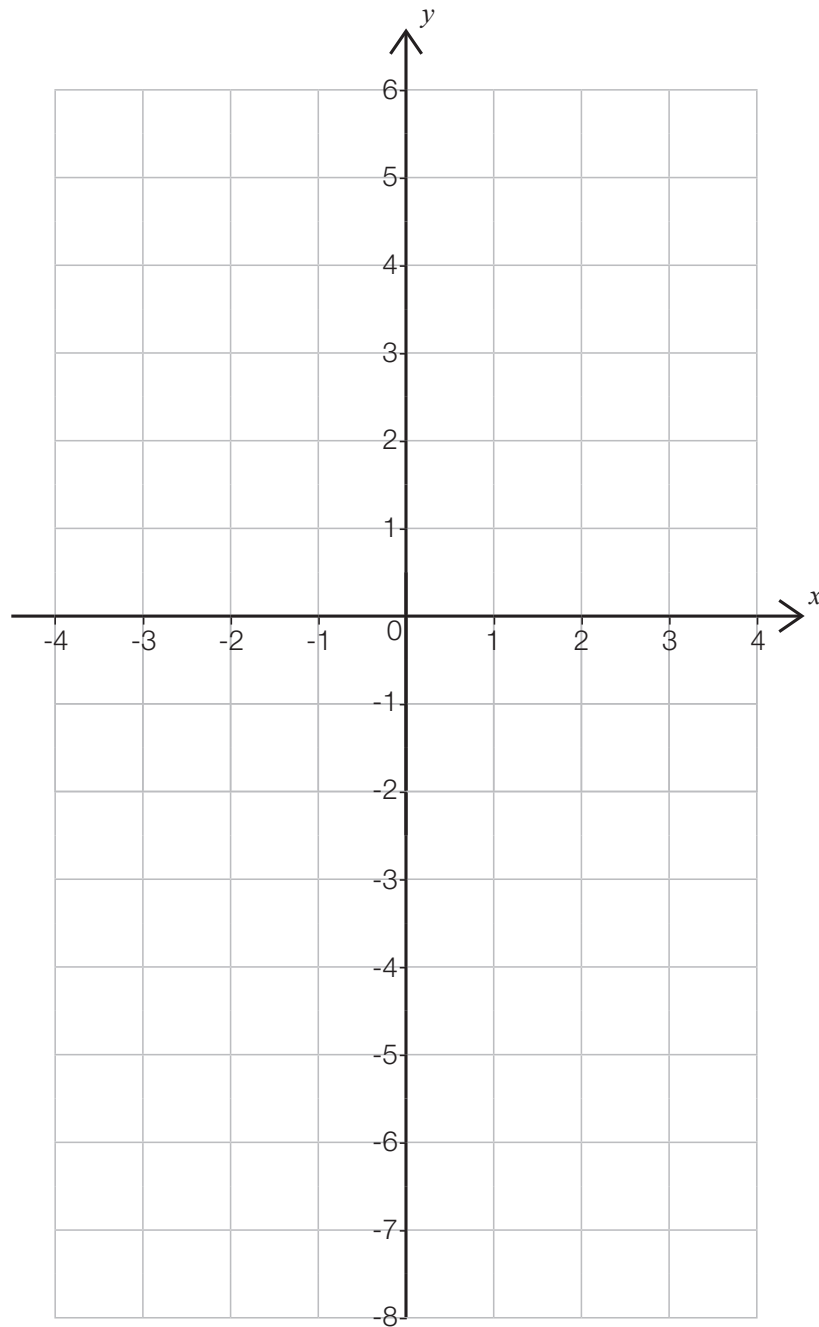


1 mark

9Complete the table of values for the line $y = 2x - 3$

x	-2	-1	0	1	2	3
y		-5			1	3

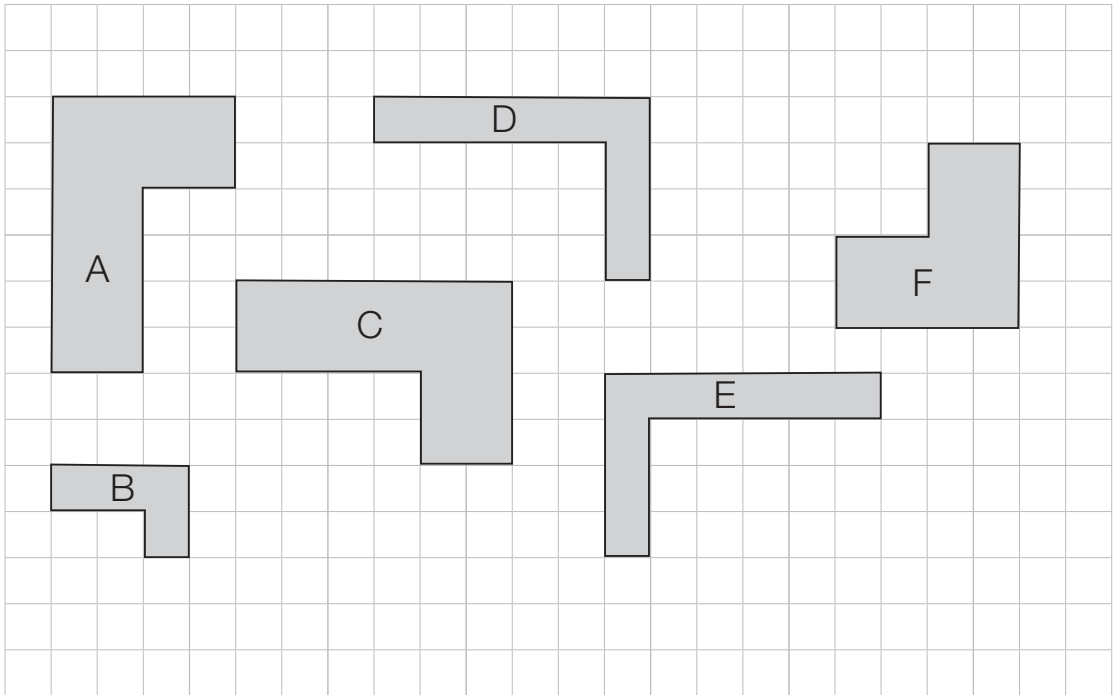
2 marks

Draw the line $y = 2x - 3$ on the grid for values of x from -2 to 3 

2 marks

10

There are 6 shapes on the grid.



Find the perimeter of shape B.

units

1 mark

Write down the letters of two shapes that are congruent.

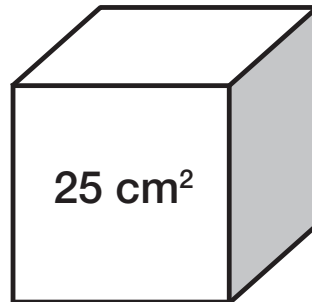
_____ and _____

1 mark

11

Here is a cube.

One face of the cube has an area of 25 cm^2 .



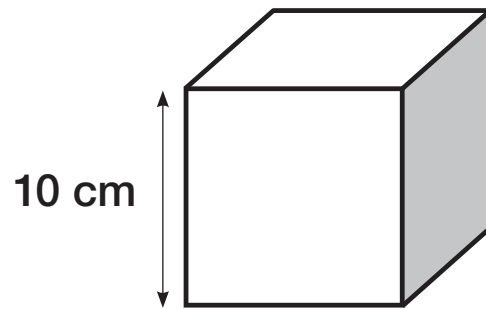
How many faces does a cube have?

1 mark

Work out the total surface area of the cube.

1 mark

The length of each edge is 10 cm.



Work out the volume of the cube.

State the units of your answer.



2 marks

12

Here is a formula connecting the number of faces (F), edges (E) and vertices (V) in a 3-D shape.

$$F = E - V + 2$$

A 3-D shape has 8 edges and 5 vertices.

How many faces does the 3-D shape have?

2 marks

13

Use a pair of compasses to draw the locus of the points that are 4 cm from point C.

C
·

2 marks

14

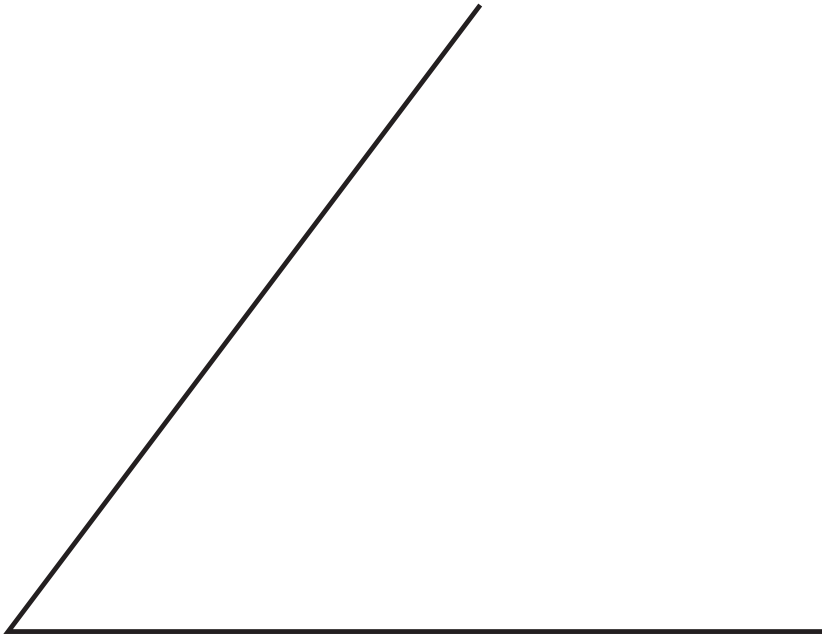
Show that the point (3, 5) does not lie on the line $y = x + 4$

1 mark

15

Use a ruler and a pair of compasses to bisect the angle.

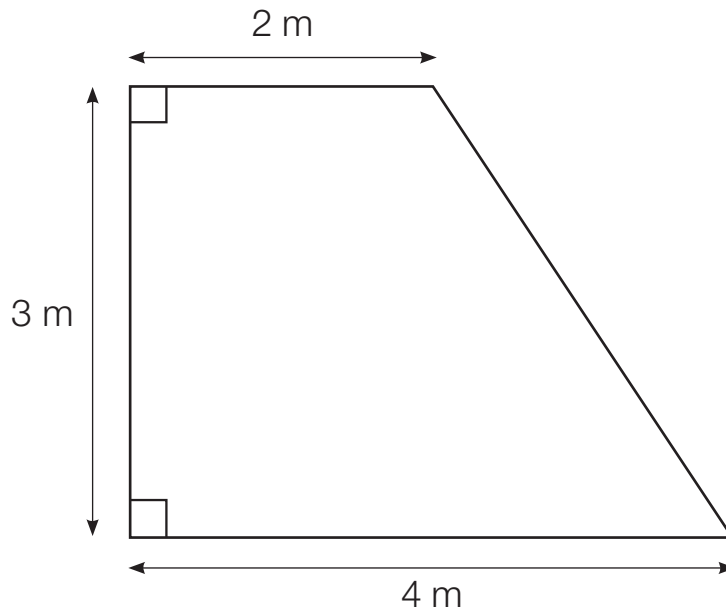
Leave your construction lines showing.



2 marks

16

Here is the side elevation of a shed.



Find the area of the side of the shed.

m²

2 marks

800 ml of paint is needed to cover 1 m² of the side of the shed.

How much paint is needed altogether to paint the side of the shed?

ml

2 marks

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