Year 9

Mathematics

Foundation: No calculator allowed

Time allowed: 45 minutes

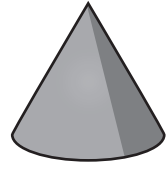| First name	
Middle name	
Last name	
Date of birth	Day Month Year
Teacher	

These assessments have been designed by White Rose Maths.
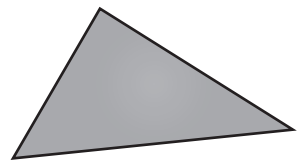For more information, please visit **www.whiterosemaths.com**

White Rose Maths

1 | Match the labels to the shapes.

Triangle

Tetrahedon

Sphere

Cone
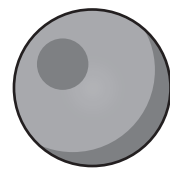
Rectangle

2 marks

2

15
46
10
21
16
3
64
13
30
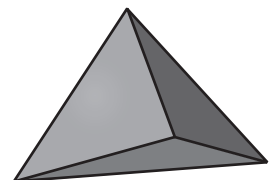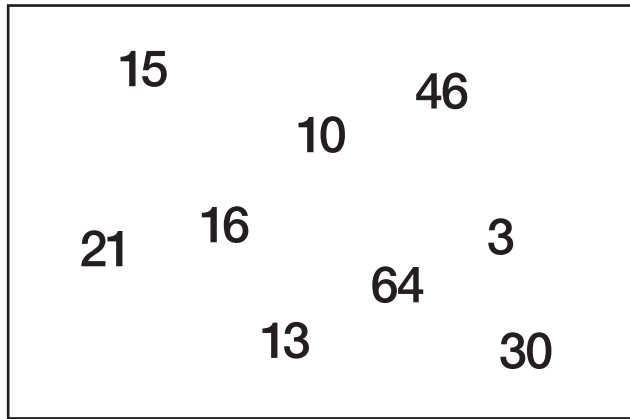
From the numbers in the rectangle,

write down a multiple of 4

1 mark

write down a prime number.

1 mark
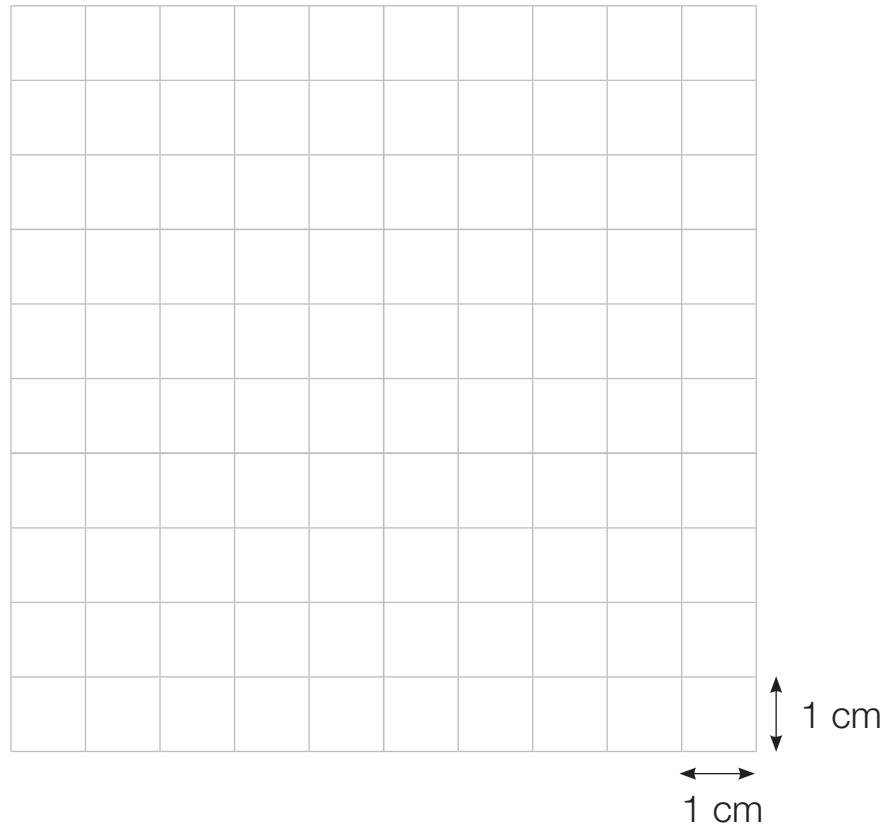
White
Rose
Maths

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.

1 cm

1 cm

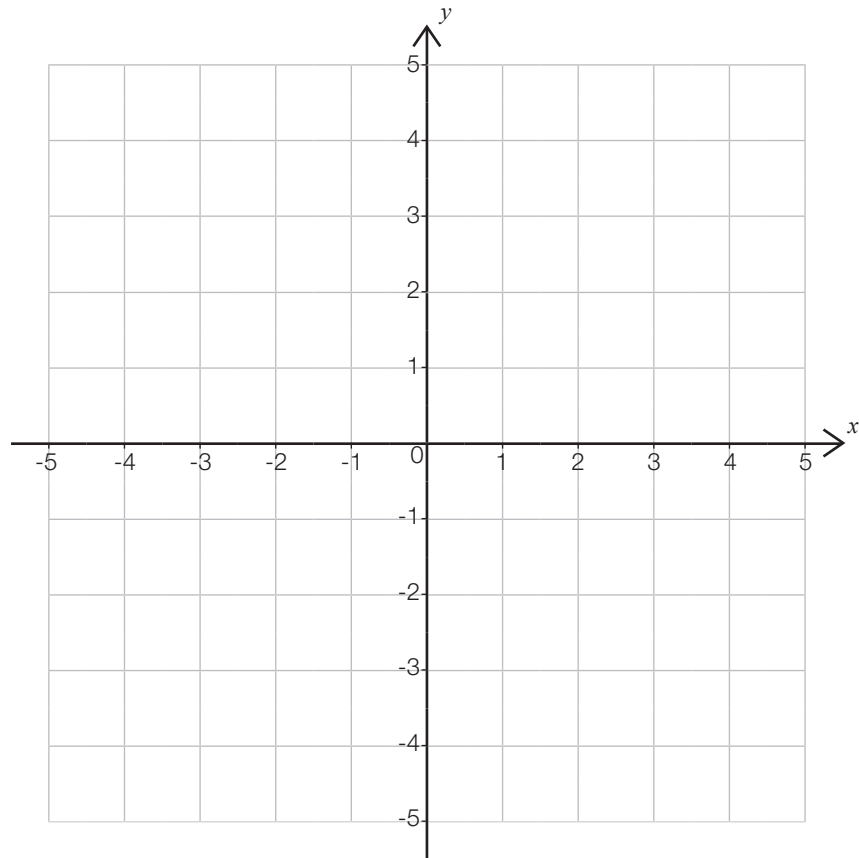**4**　Circle all the values of x that satisfy the inequality $x \geq 2$

0　　　−4　　　2　　　−1　　　6　　　5

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

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

7 Solve the equations.

$p + 2 = 11$

$p =$

$15 = 3x$

$x =$

$2y + 7 = 19$
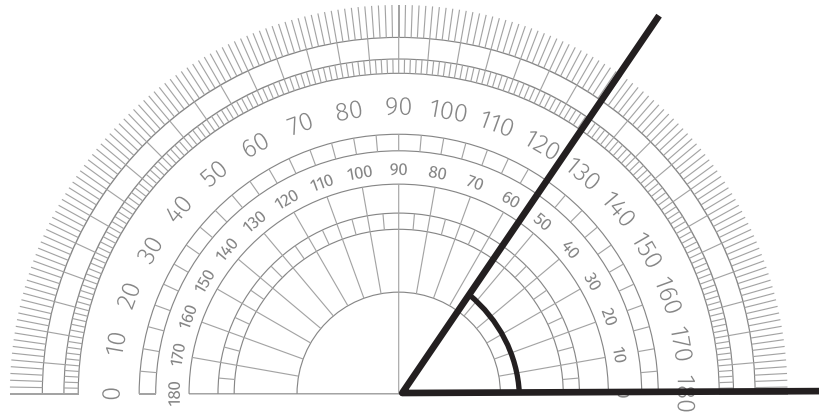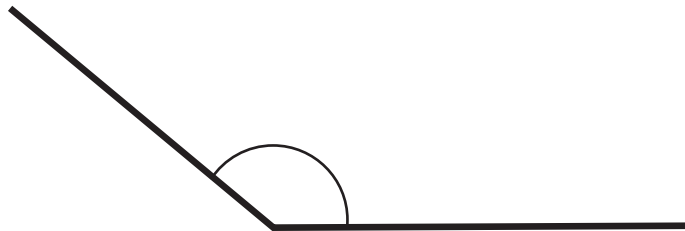
$y =$

8

Amy thinks that the angle measures 125°.

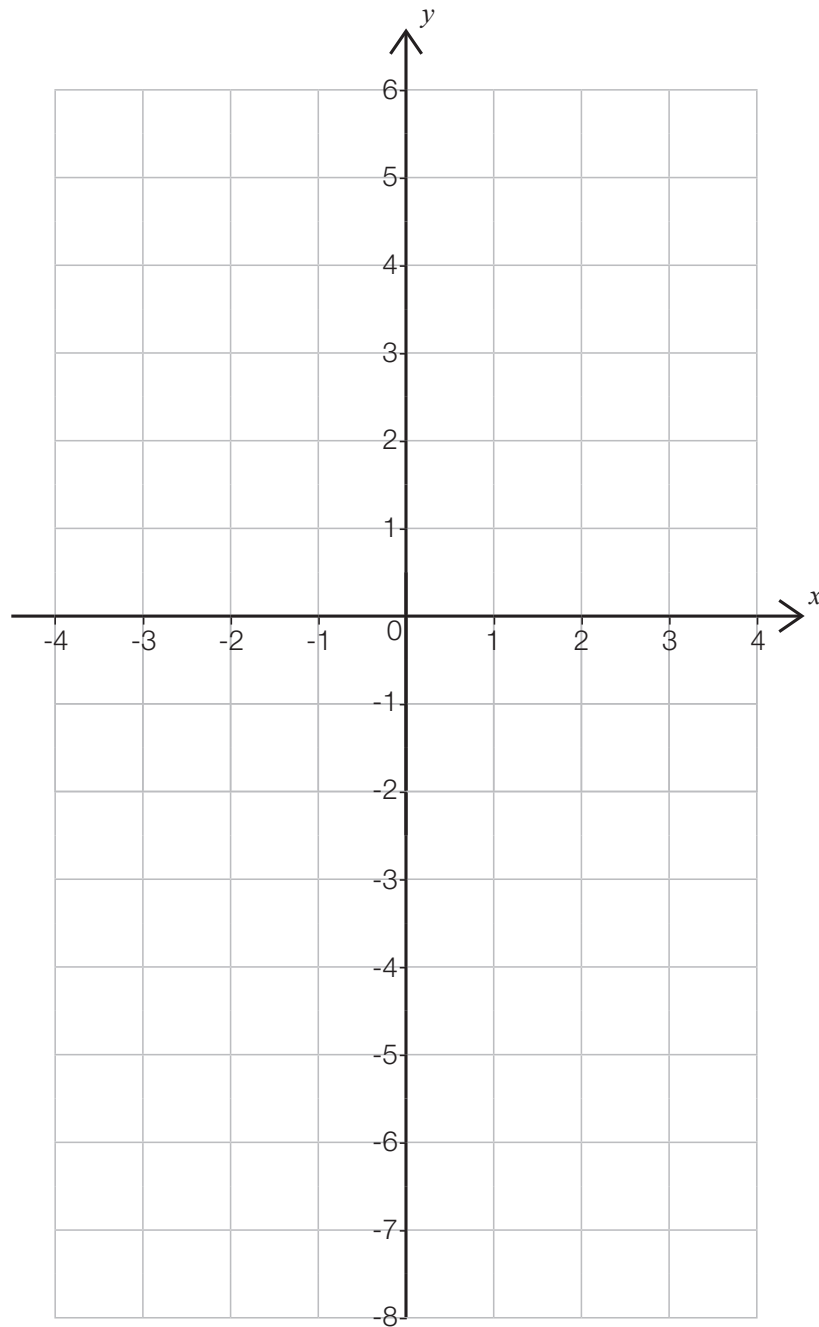Explain what Amy has done wrong.

_____
1 mark

Measure the angle.

◯

_____
1 mark

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

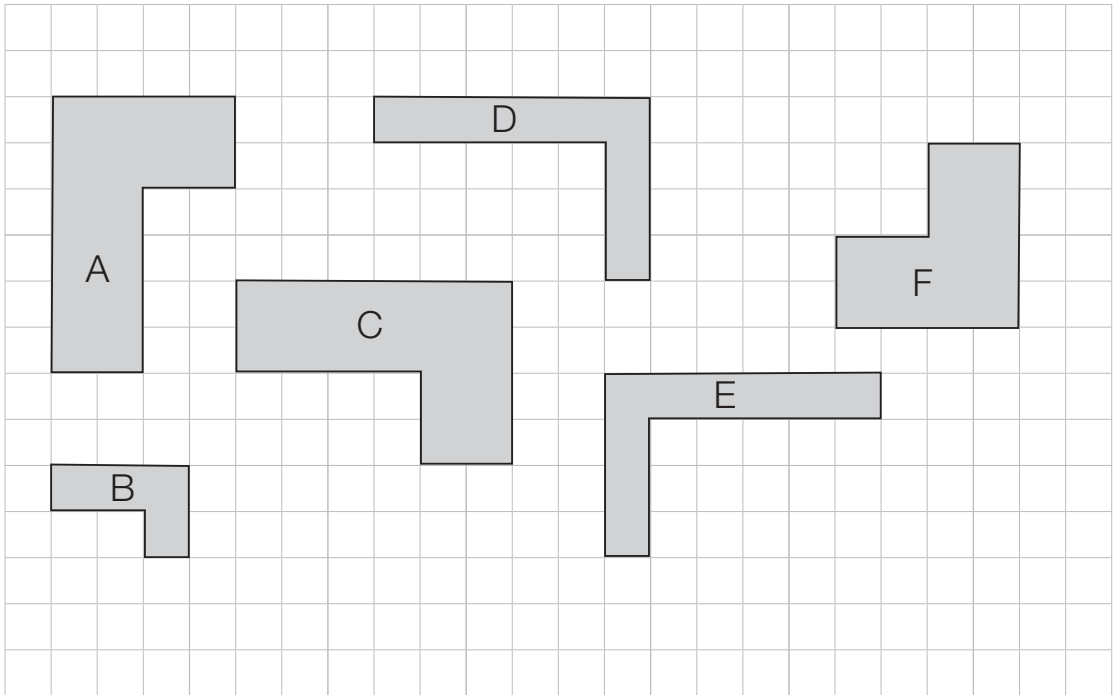| x	–2	–1	0	1	2	3
y		–5			1	3

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

10 There are 6 shapes on the grid.

Find the perimeter of shape B.

units

Write down the letters of two shapes that are congruent.

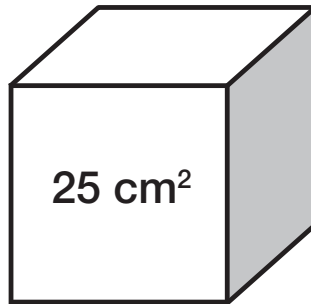_____ and _____

11 Here is a cube.

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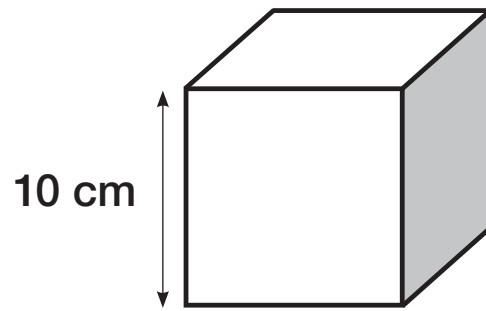

25 cm^2

> How many faces does a cube have?

1 mark

> Work out the total surface area of the cube.

cm^2

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

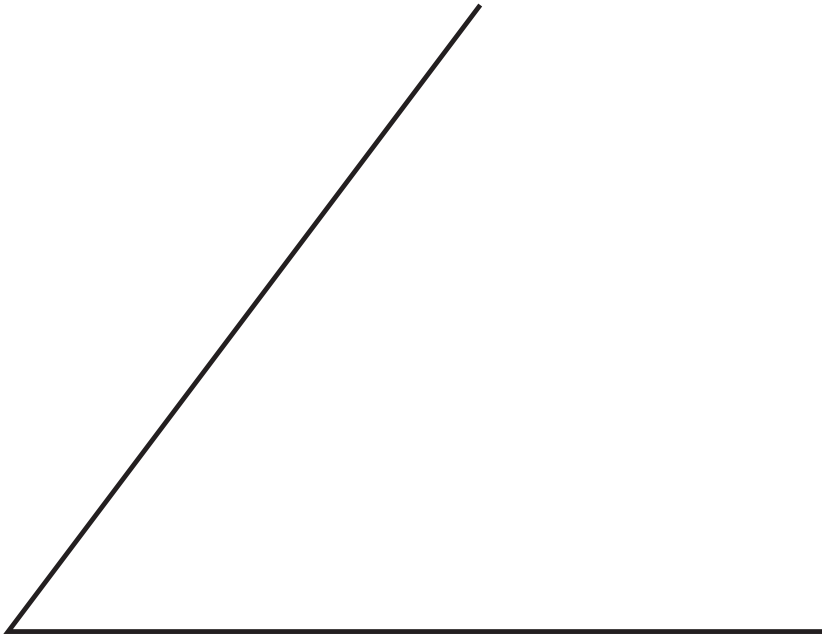**14** Show that the point (3, 5) does not lie on the line $y = x + 4$

1 mark

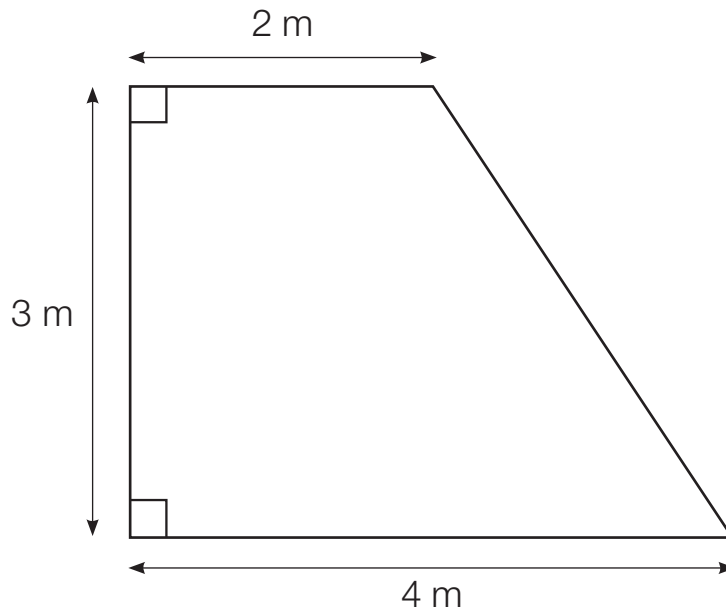Use a ruler and a pair of compasses to bisect the angle.

Leave your construction lines showing.

2 marks

16

Here is the side elevation of a shed.

2 m

3 m

4 m

Find the area of the side of the shed.

m^2

2 marks

800 ml of paint is needed to cover 1 m^2 of the side of the shed.

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

ml

2 marks

[BLANK PAGE]

Please do not write on this page.