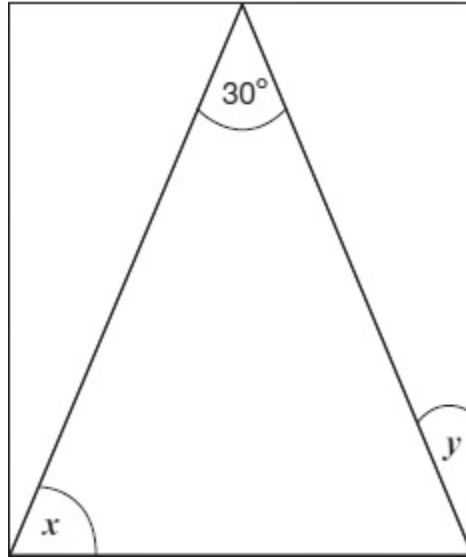


1. Here is an **isosceles** triangle inside a rectangle.



Not to scale

Calculate the sizes of angles  $x$  and  $y$ .

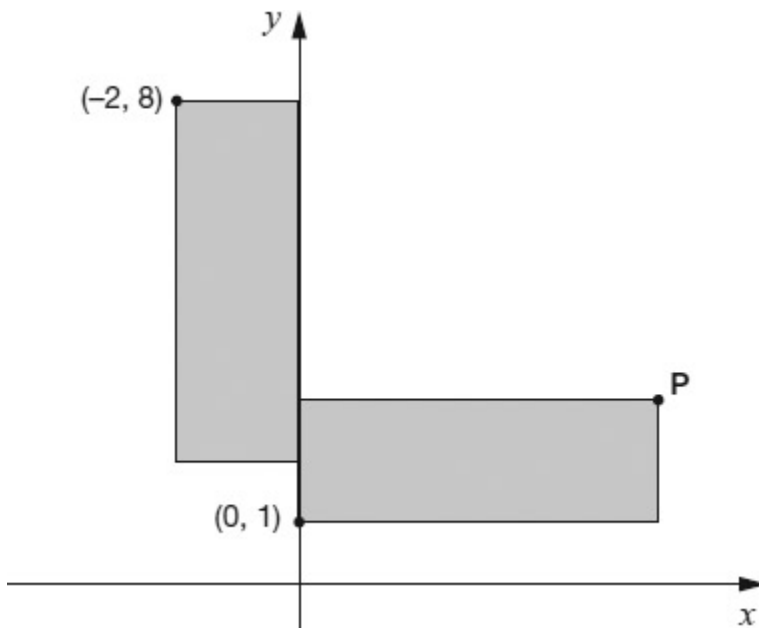
Show your method

$y =$ <input type="text"/>	$x =$ <input type="text"/>
----------------------------	----------------------------

2 marks

2. These two rectangles are identical.

The length of each rectangle is **three times** its width.



Not to scale

What are the coordinates of point P?

1 mark

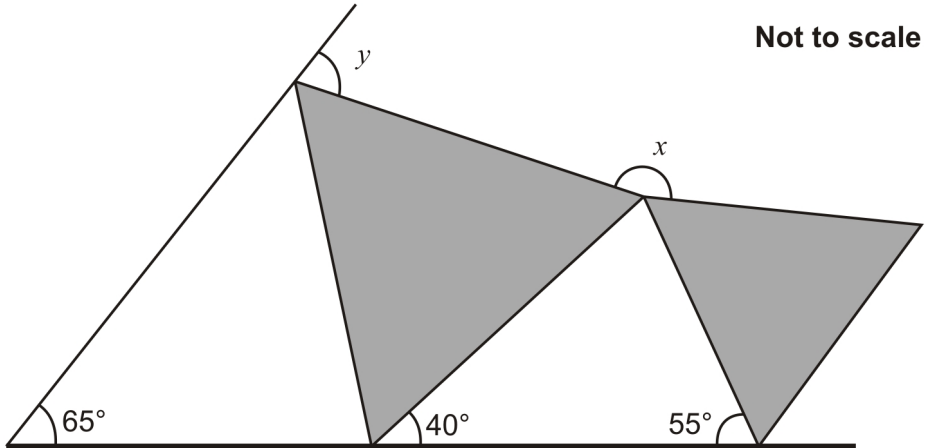
3. Join dots on the grid to make a quadrilateral that has **3 acute** angles.



1 mark

4.

The diagram shows two shaded **equilateral triangles**.



Calculate the size of the **angle  $x^\circ$**  and **angle  $y$**

Do **not** use a protractor (angle measurer).

$x =$    $^\circ$

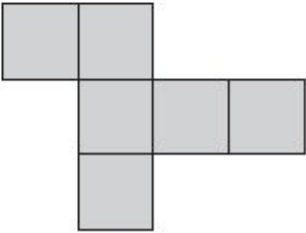
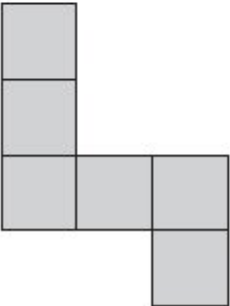
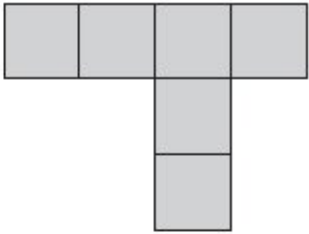
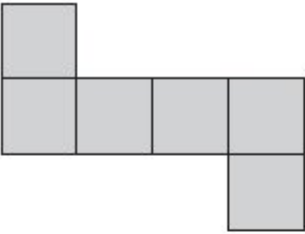
$y =$    $^\circ$

2 mark

5.

Here are four diagrams.

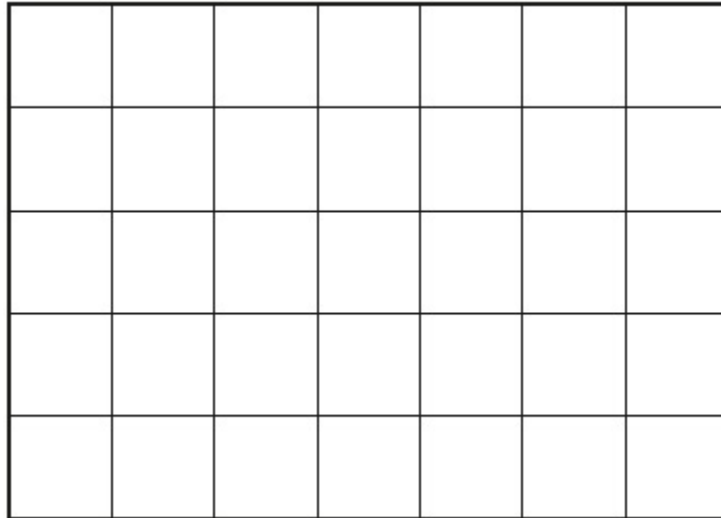
On each one put a tick (✓) if it is a net of a cube.  
Put a cross (X) if it is not.



2 marks

6.

Adam has this rectangular piece of card. It is marked with grid lines.



Adam makes two straight cuts along the grid lines.

The two cuts divide the rectangle into 3 shapes:

- 2 squares of **different** size, and
- 1 rectangle.

Using the grid lines, draw **two** lines that show where Adam could have made his cuts.

Use a ruler.

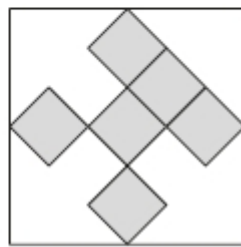
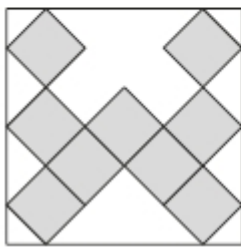
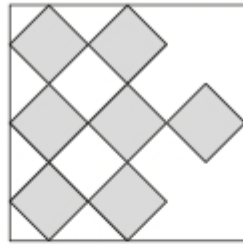
1 mark

7.

These three square tiles have symmetrical patterns on them.

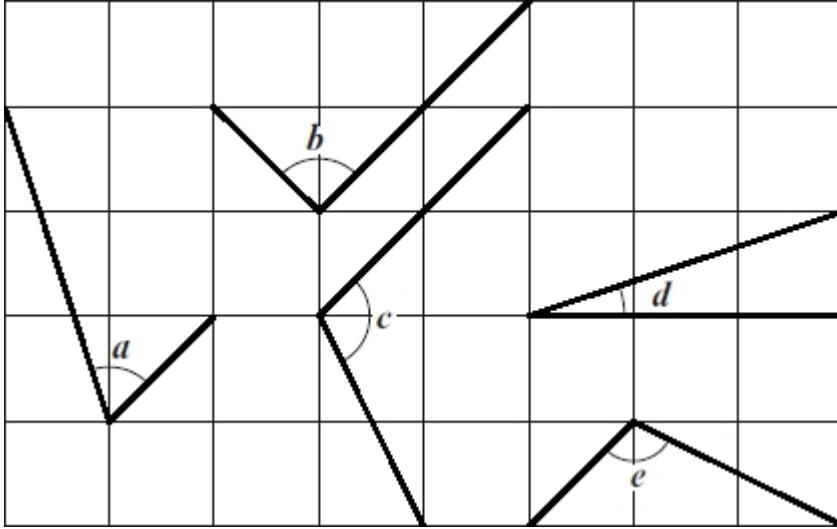
Draw the line of symmetry on each tile.

Use a ruler.



2 marks

8. Here are five angles marked on a grid of squares.



Write the letters of the angles that are **obtuse**.

\_\_\_\_\_

1 mark

Write the letters of the angles that are **acute**.

\_\_\_\_\_

1 mark

9. A bicycle wheel has a diameter of 64 cm.

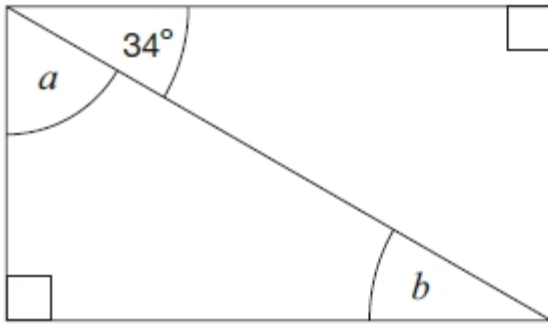
What is the **radius** of the bicycle wheel?

--

1 mark

10.

Here is a rectangle.



Not to  
scale

Calculate the size of angles  $a$  and  $b$ .

Do **not** measure the angles.

$a =$

1 mark

$b =$

1 mark

## Mark schemes

1.

Award **TWO** marks for the correct answer of  $x = 75$  **AND**  $y = 15$

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method calculating both angles, e.g.

- $180 - 30 = 150$   
 $150 \div 2 = 70$  (error)  
 $90 - 70$

**OR**

Award **ONE** mark for either correct  $x$  OR  $y$ .

*Answer need not be obtained for the award of **ONE** mark.*

*If there is no evidence of an appropriate method and the values for  $x$  **AND**  $y$  are incorrect, accept for **ONE** mark  $x + y = 90$ , unless  $x$  is between 65 – 69 (inclusive) **AND**  $y$  is between 21 – 25 (inclusive).*

Up to 2m

[2]

2.

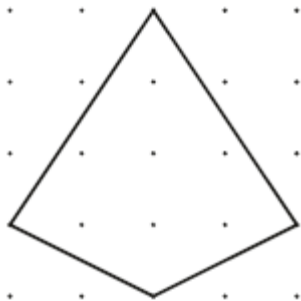
Award **ONE** mark for  $x$  and  $y$  coordinates written correctly:

(6, 3)

[1]

3.

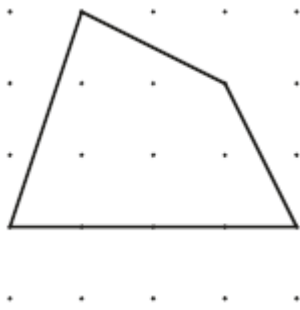
A quadrilateral with three acute angles, e.g.



**OR**



OR



Accept inaccurate drawing provided the intention is clear.

[1]

4.

(a)  $x = 155^\circ$

1

(b)  $y = 85^\circ$

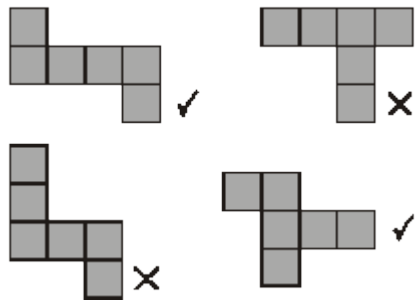
If answers for 5a and 5b are transposed, but otherwise correct, award **ONE** mark only, in the 5b box.

1

[2]

5.

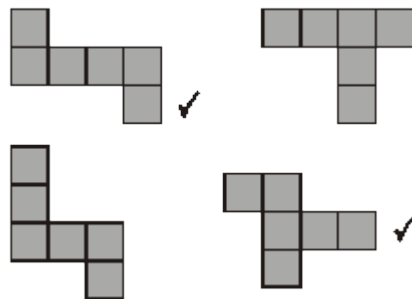
Award **TWO** marks for diagrams ticked or crossed as shown:



If the answer is incorrect, award **ONE** mark for three diagrams ticked or crossed correctly.

Accept alternative unambiguous indications such as **Y** or **N**.

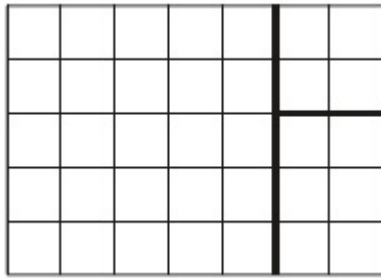
For **TWO** marks accept:



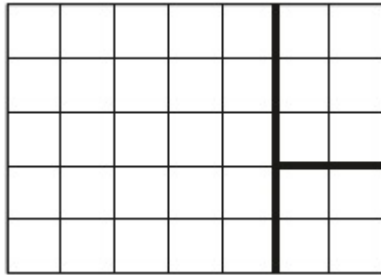
Up to 2

[2]

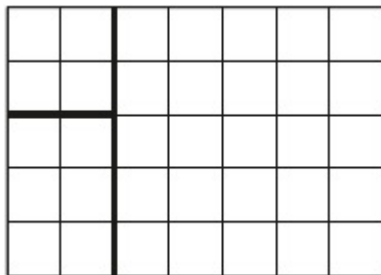
6. Rectangle divided, as shown:



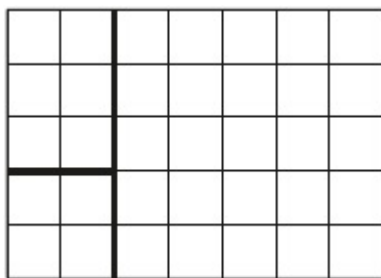
OR



OR



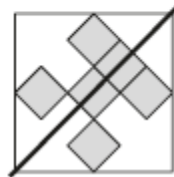
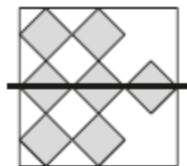
OR



*Accept slight inaccuracies in drawing provided the intention is clear.*

[1]

**7.** Award **TWO** marks for three lines of symmetry drawn correctly as shown:



If the answer is incorrect, award **ONE** mark for two lines of symmetry correctly drawn.

*Accept inaccurate drawing provided the intention is clear.*

Up to 2

[2]

**8.** (a) *c AND e*

*Letters may be given in either order.*

1

(b) *a AND d*

*Letters may be given in either order.*

1

[2]

**9.** 32

[1]

**10.** (a) 56

1

(b) 34

*If the answers to (a) and (b) are incorrect, award **ONE** mark if their (a) plus their (b) = 90°, provided that (b) is **not** 45°, 30° or 60°.*

1

[2]