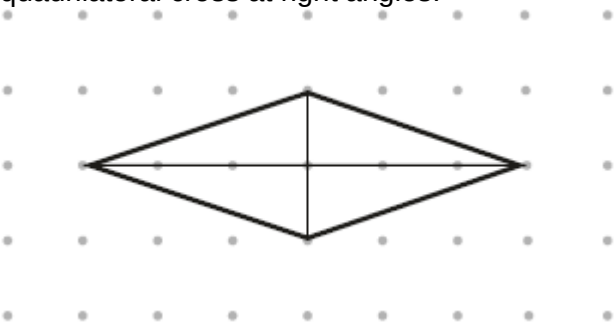
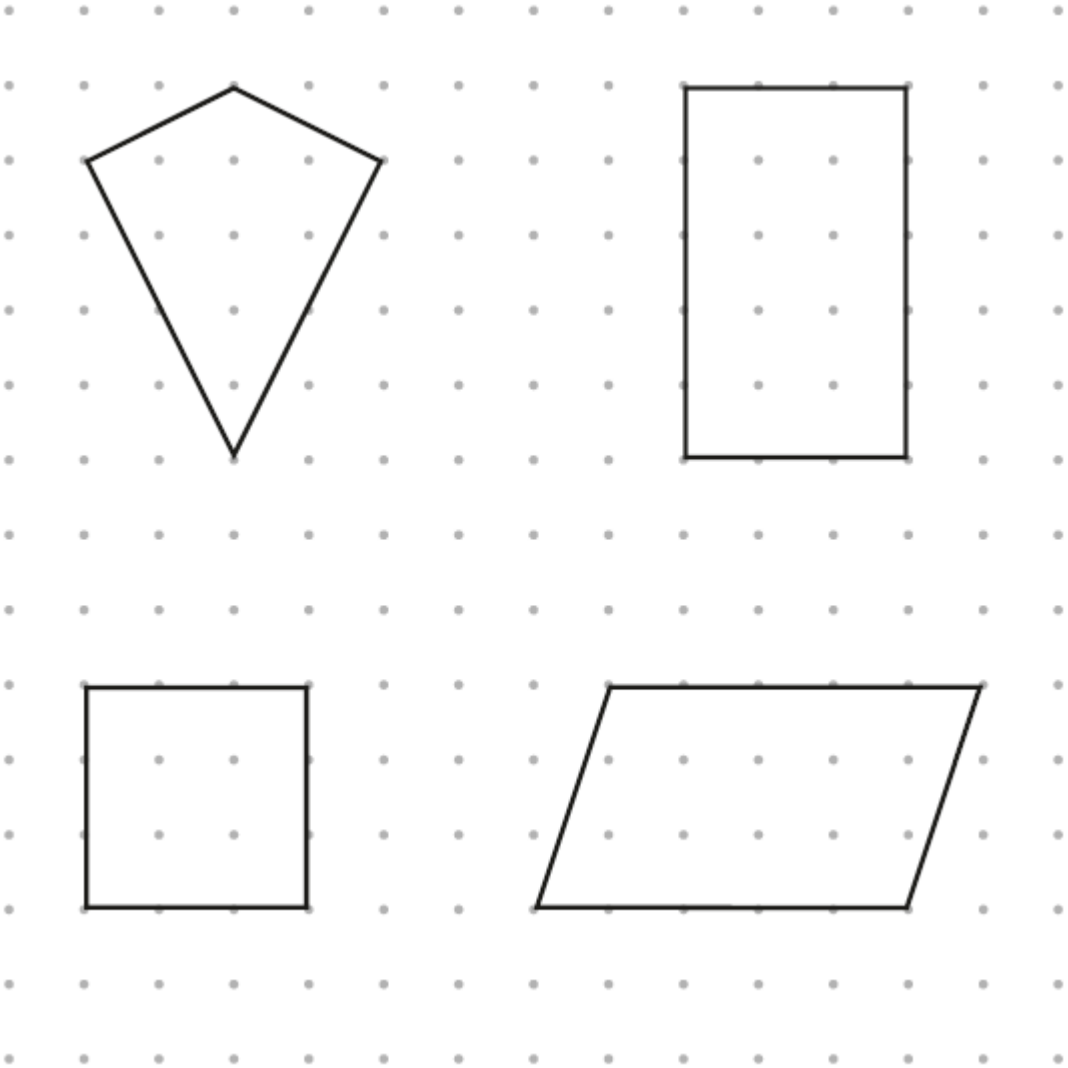
# Year 5 Geometry

**Q1.**

The diagonals of this quadrilateral cross at right angles.



Tick **all** the quadrilaterals that have diagonals which cross at right angles.



2 marks

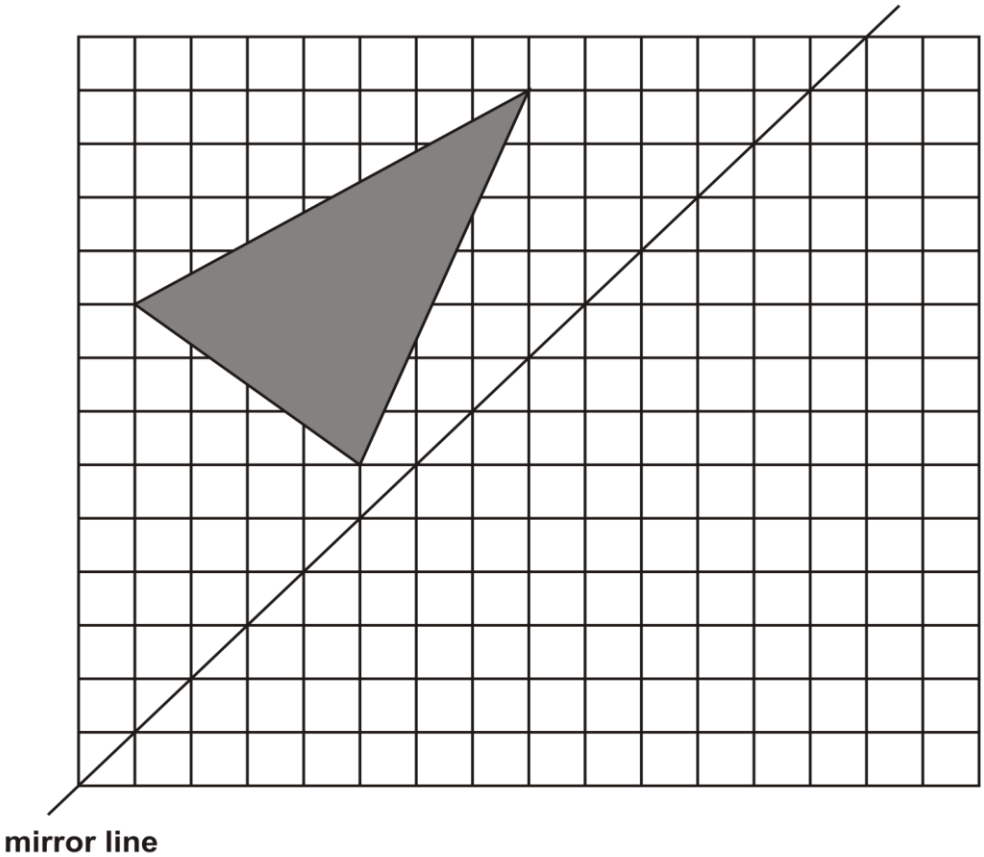
**Q2.**

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

1 mark

**Q3.**

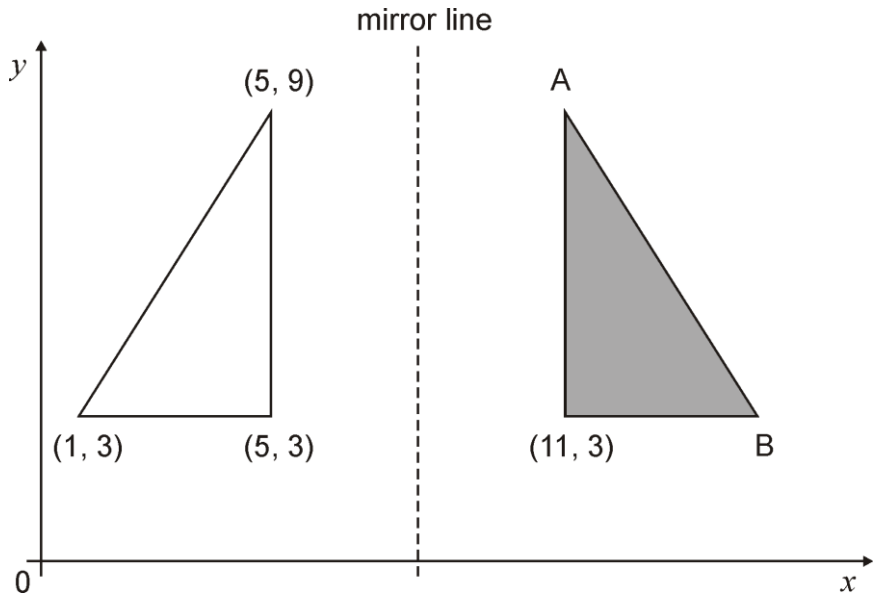
Draw the **reflection** of the shaded triangle in the mirror line.




2 marks

**Q4.**

The shaded triangle is a reflection of the white triangle in the mirror line.




Write the **co-ordinates** of point **A** and point **B**.

**A** is ( , ) **B** is ( , )

2 mark

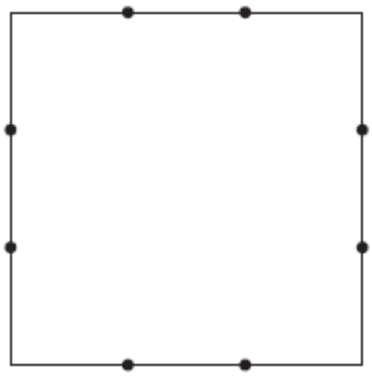
**Q5.**

This square has two dots on each side.

The dots are equally spaced.

Join two dots to divide the square into **two equal parts**.

Use a ruler.



1 mark

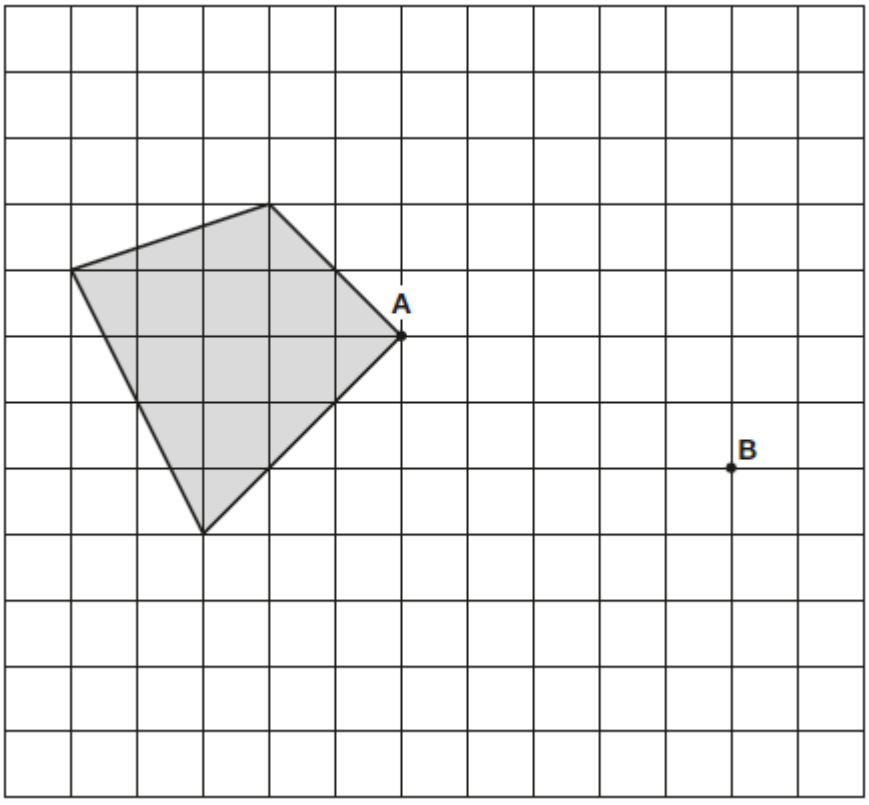
**Q6.**

Here is a shaded shape on a grid.

The shape is translated so that point **A** moves to point **B**.

Draw the shape in its new position.

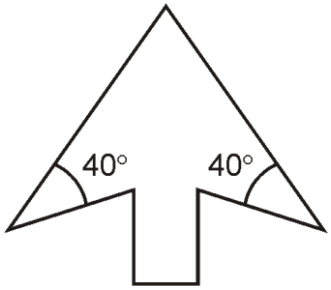
Use a ruler.




2 marks

**Q7.**

This is a design for an arrowhead.

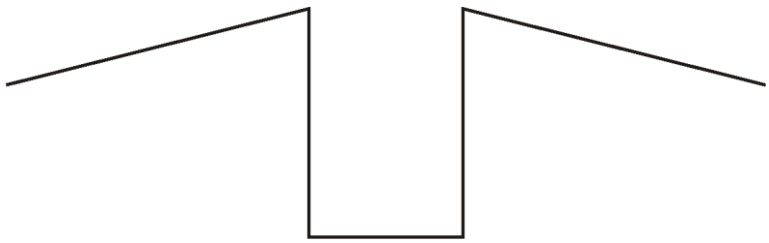



Below is part of a larger scale drawing of the arrowhead.

The drawing has the same size angles as the design.

Draw two more lines to complete the arrowhead **accurately**.

Use an angle measurer (protractor).



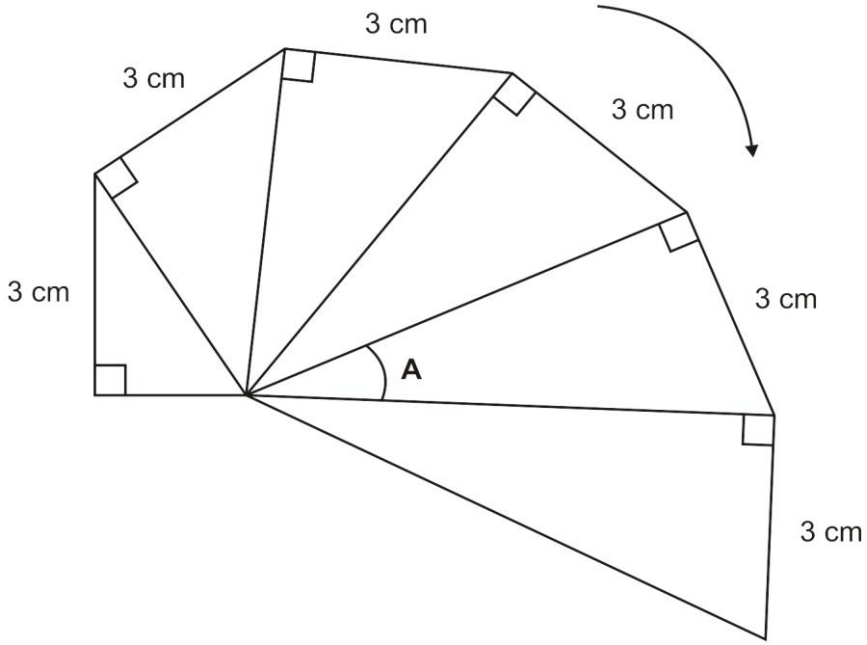
2 marks

**Q8.**

Here is the start of a spiral sequence of right-angled triangles.

Draw **accurately** the next right-angled triangle on the diagram.

You may use an angle measurer.




2 marks

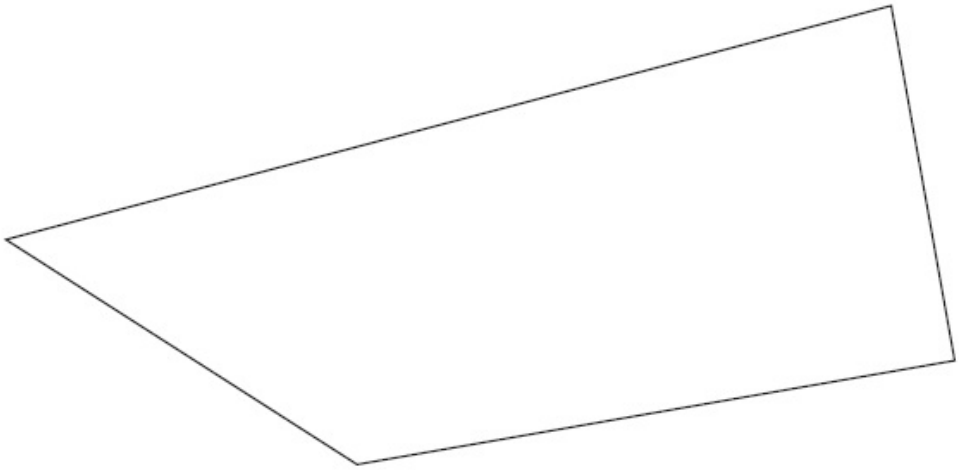
Use an angle measurer to find the size of angle **A.**

1 mark

**Q9.**

In this shape, one of the angles is **obtuse**.

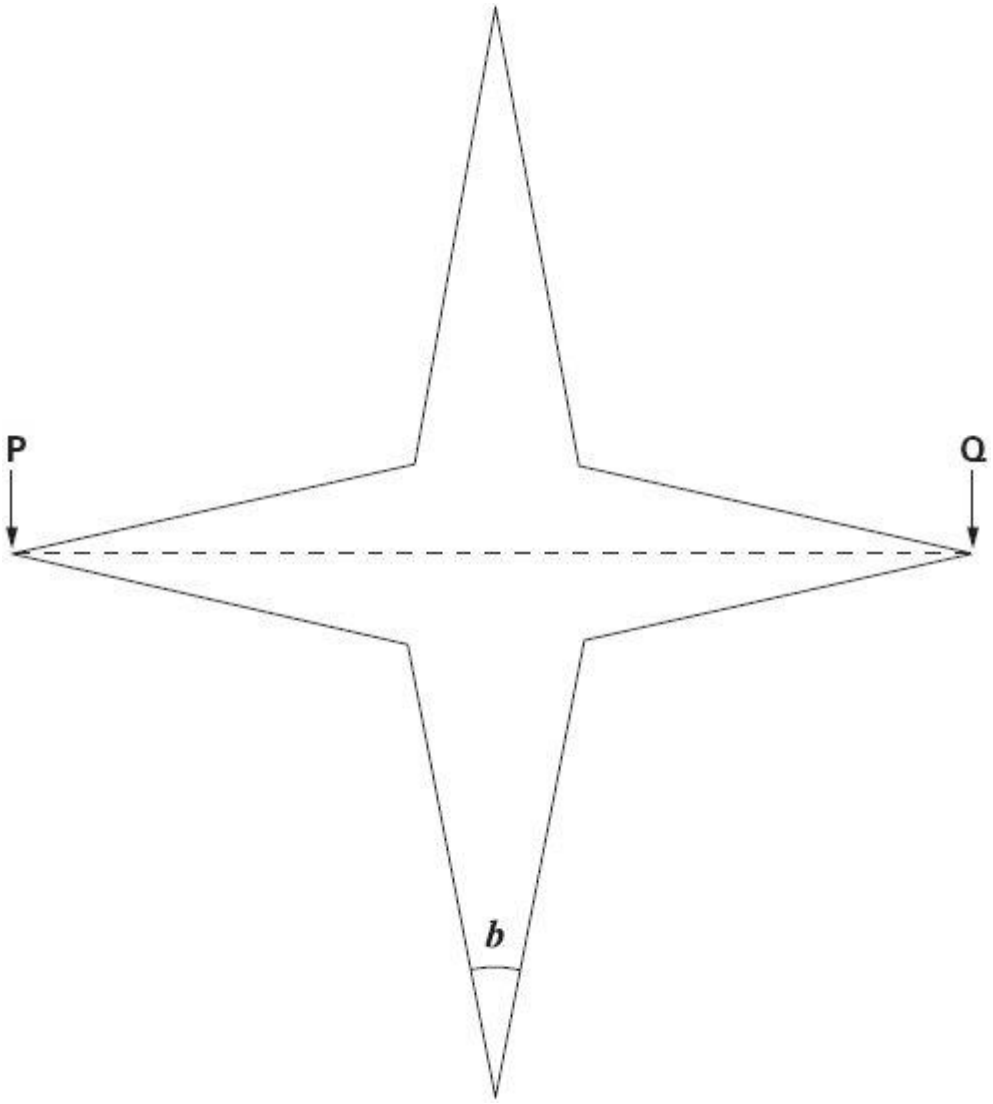
Tick (✓) the obtuse angle.



1 mark

**Q10.**

Look at this star.




Use a ruler to measure **accurately** the **width** of the star, from **P** to **Q**.

Give your answer in **millimetres**.

mm

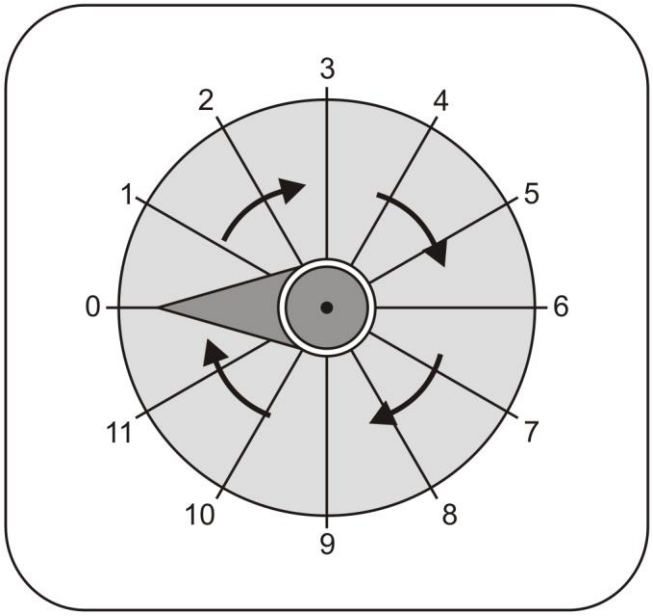
1 mark

Use a protractor (angle measurer) to measure **angle *b***.

1 mark

**Q11.**

Here is a dial.




The pointer on this dial turns in a **clockwise** direction.
The pointer is at **0**.

Which **number** does it point to after a turn of **270°**?

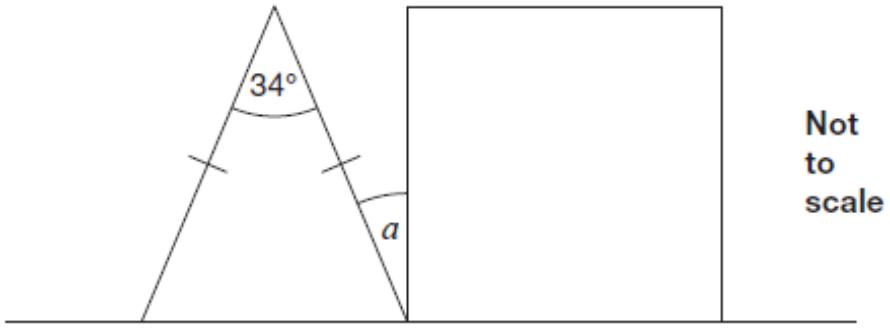
1 mark

The pointer moves from **10** to **11**
How many **degrees** does it turn through?

1 mark

**Q12.**

The diagram shows an isosceles triangle and a square on a straight line.




Calculate angle $a$.

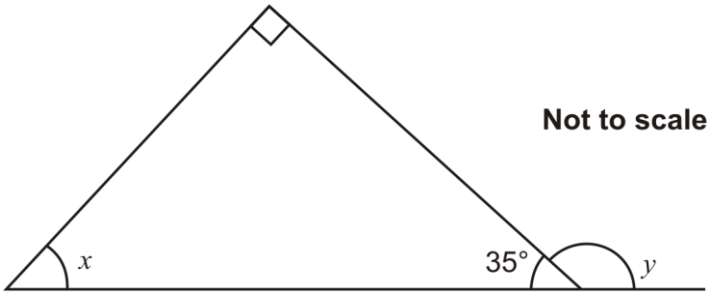
Show your method

°

2 marks

**Q13.**

Look at this diagram.




Calculate the size of angle $x$ and angle $y$.

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

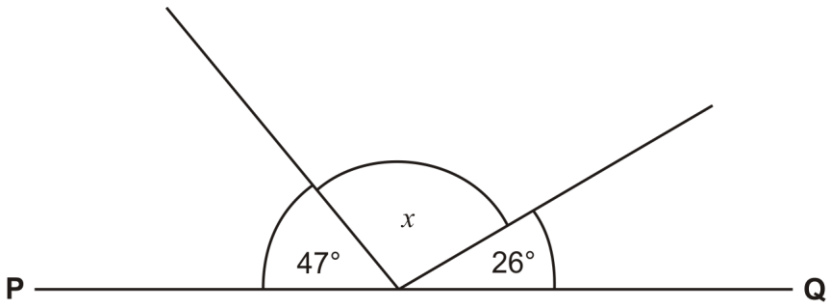
$x$ = ° 1 mark

$y$ = ° 1 mark

**Q14.**

**PQ** is a straight line.

Not drawn accurately




**Calculate** the size of angle $X$.

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

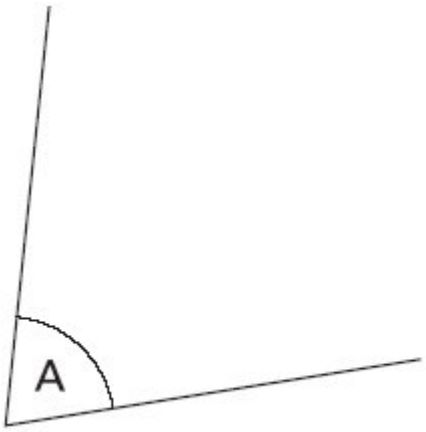
°

1 mark

**Q15.**

Measure **angle A** accurately.

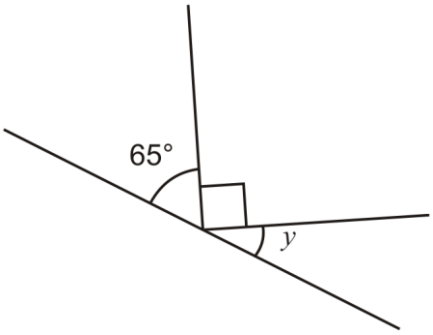
Use a protractor (angle measurer).




**angle A** °

1 mark

**Q16.**




**Not to scale**

Calculate the size of angle ***y*** in this diagram.

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

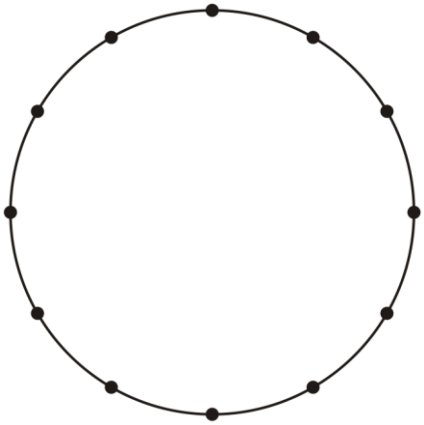
1 mark

**Q17.**

The twelve points on this circle are equally spaced.

Join four points to make a **square**.

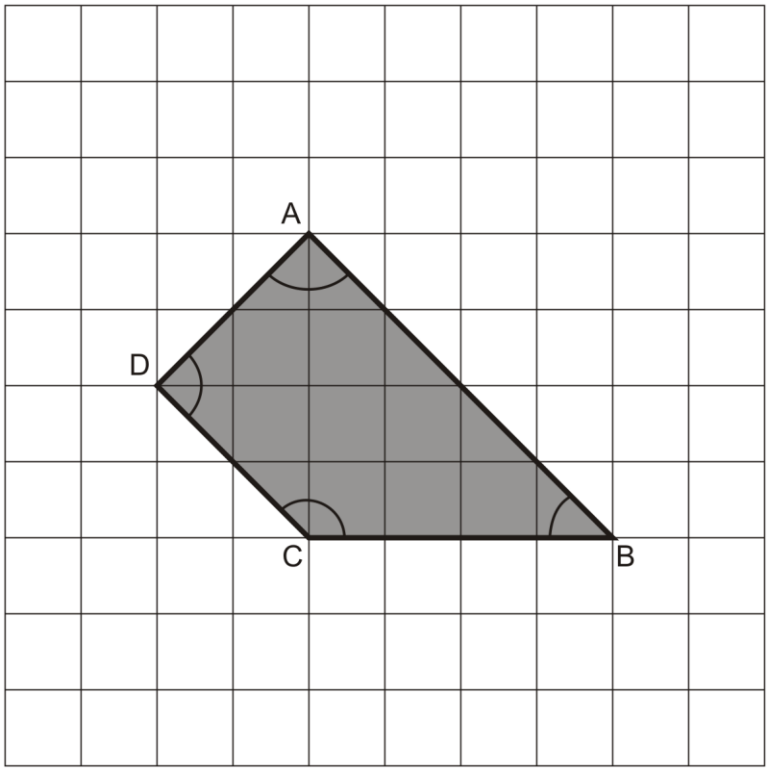
Use a ruler.



1 mark

**Q18.**

Here is a shape on a square grid.




For each sentence, put a tick (✓) if it is true.

Put a cross (✗) if it is not true.

Angle **C** is an **obtuse** angle. ☐

Angle **D** is an **acute** angle. ☐

Line **AD** is **parallel** to line **BC**. ☐

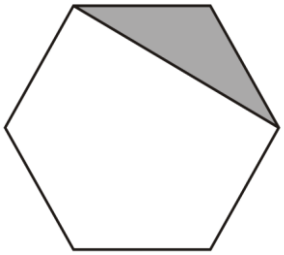
Line **AB** is **perpendicular** to line **AD**. ☐

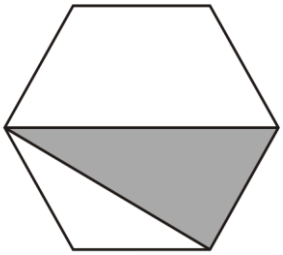
2 mark

**Q19.**

These two shaded triangles are each inside a regular hexagon.

Under each hexagon, put a ring around the correct name of the shaded triangle.





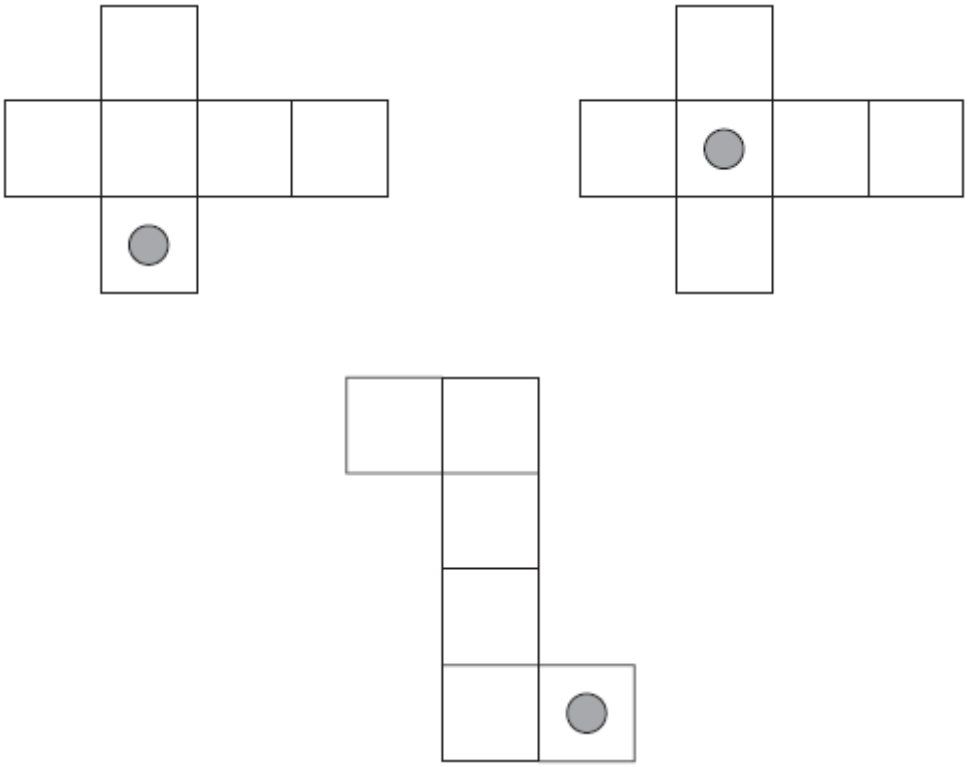
| | |
|---|---|
| equilateral | equilateral |
| isosceles | isosceles |
| scalene | scalene |

1 mark

**Q20.**

Here are three nets of a cube.

On each net draw **one more dot** so that each cube will have dots on **opposite** faces.



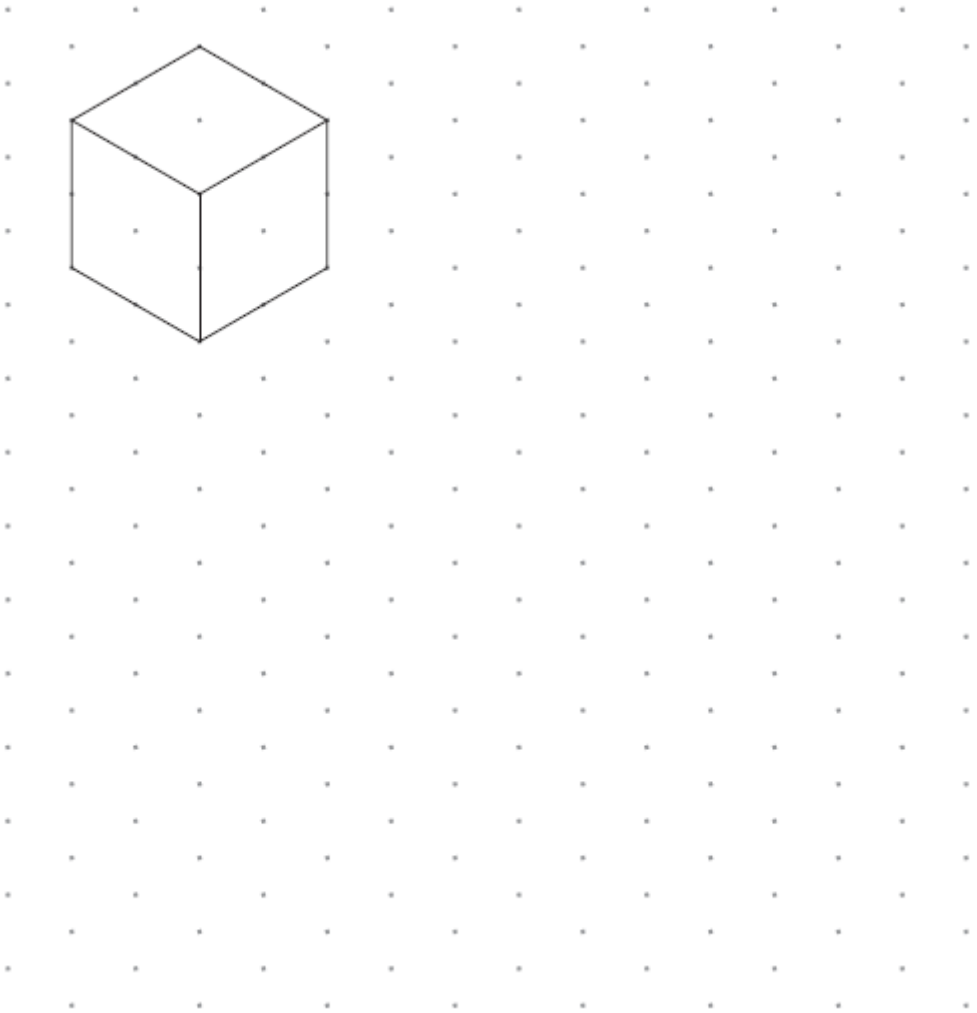
2 marks

**Q21.**

Here is a drawing of a cube on an isometric grid.

Draw a cuboid that has:

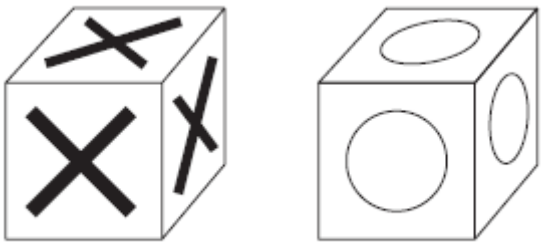
- the **same** volume
- **half** the height.



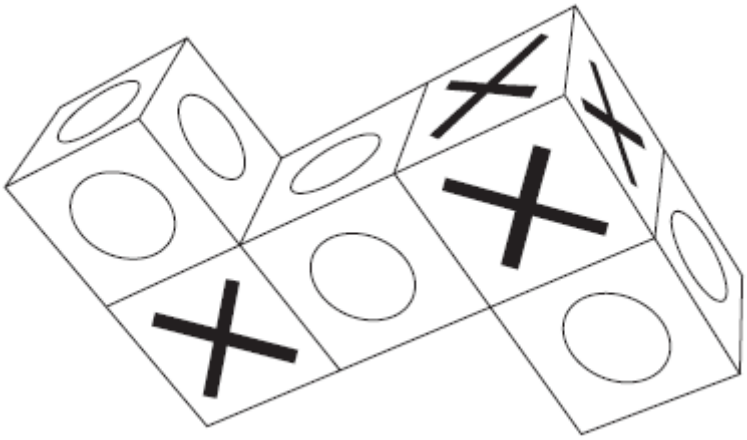
2 marks

**Q22.**

Seb has some cubes with a cross on each face and some cubes with a circle on each face.



He sticks five cubes together to make this shape.



How many crosses and how many circles are there on the **outside** of the shape?

**Number of crosses** ☐

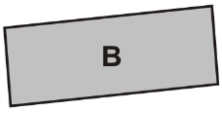
1 mark

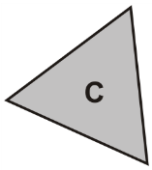
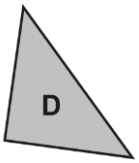
**Number of circles** ☐

1 mark

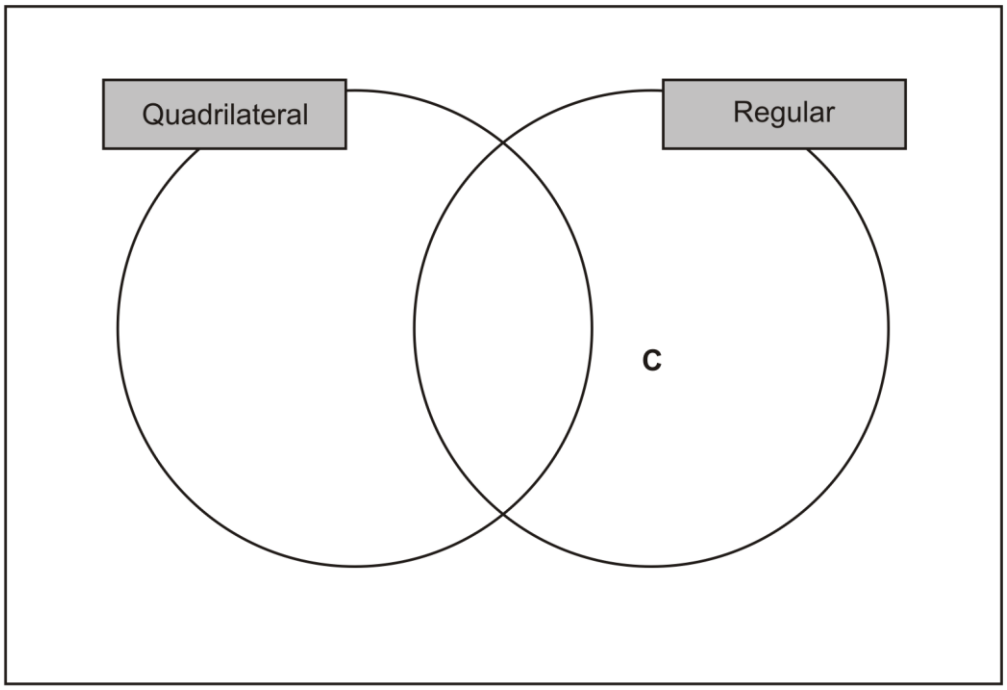
**Q23.**

Here are four shapes in a Carroll diagram.

| | Regular | Not regular |
|---|---|---|
| Quadrilateral |   |   |

| | | |
|---|---|---|
| Not a quadrilateral |   |   |

Use this information to write the letters **A**, **B** and **D** in the Venn diagram below.




2 marks