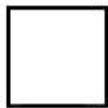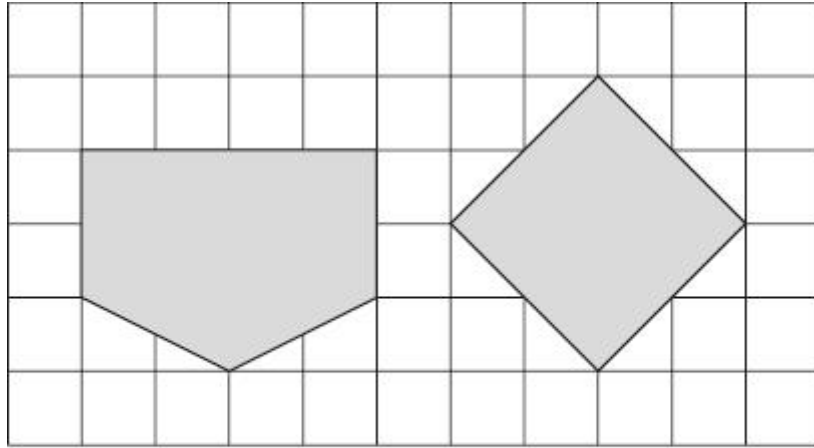**Q1.**

Here are two shapes on a square grid.
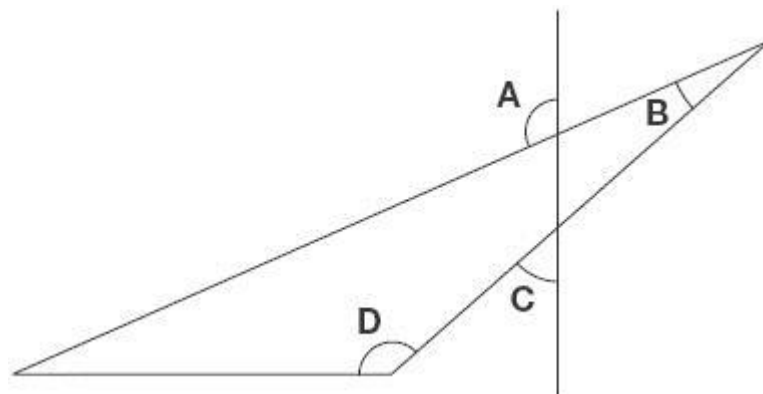
For each shape, write how many **right angles** it has.

☐   ☐

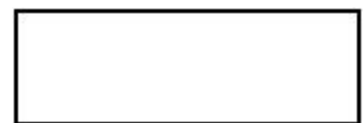<div align="right">1 mark</div>

Q2.

This diagram has four angles marked **A**, **B**, **C** and **D**.

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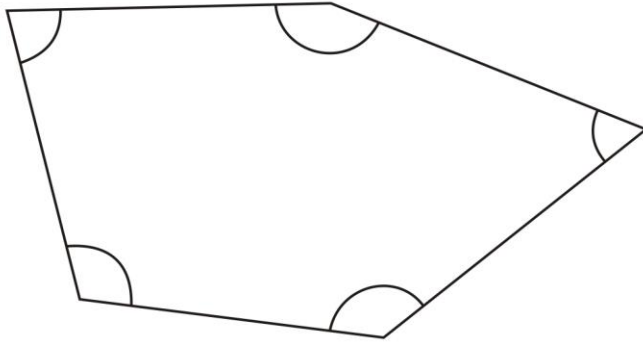
[   ]

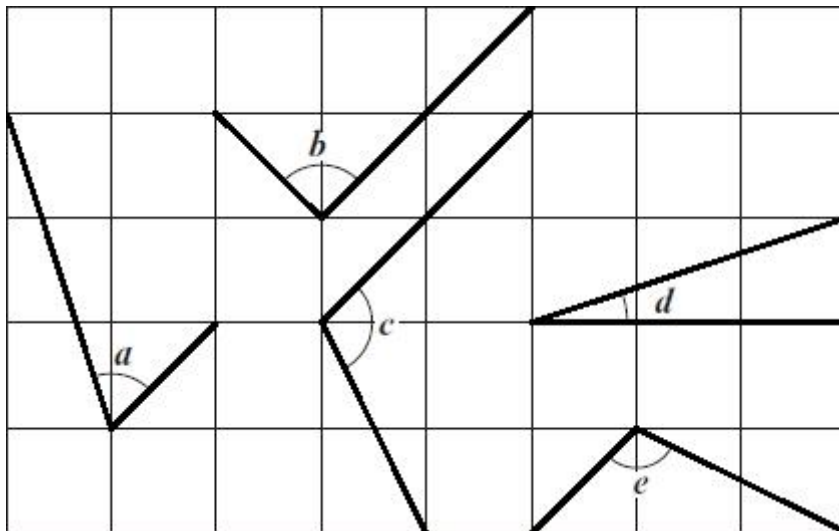<div align="right">1 mark</div>

Q3.

Look at this shape.

Tick (✓) each angle that is **less** than a right angle.

Q4.

Here are five angles marked on a grid of squares.

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

_____

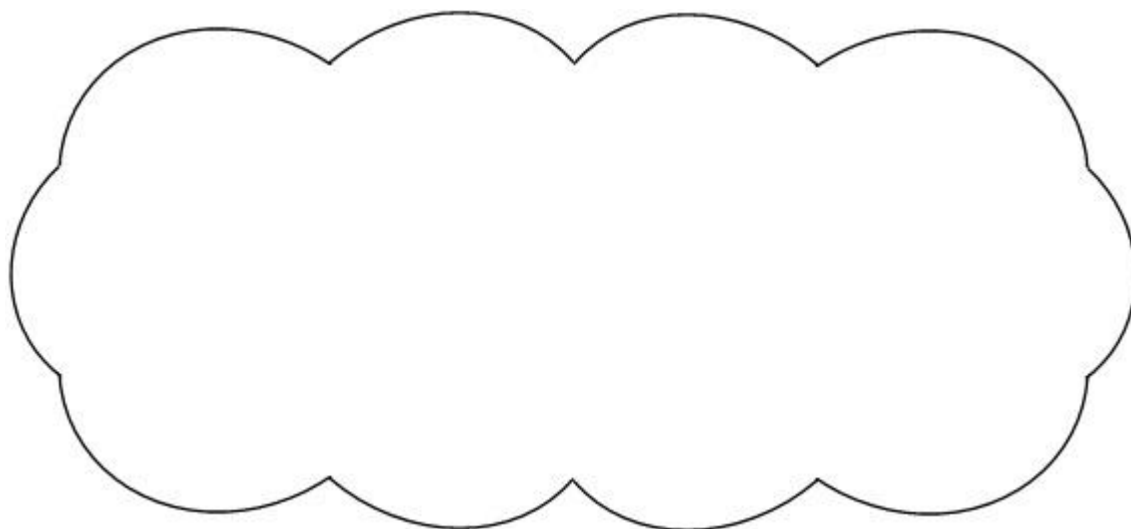Write the letters of the angles that are **acute**.
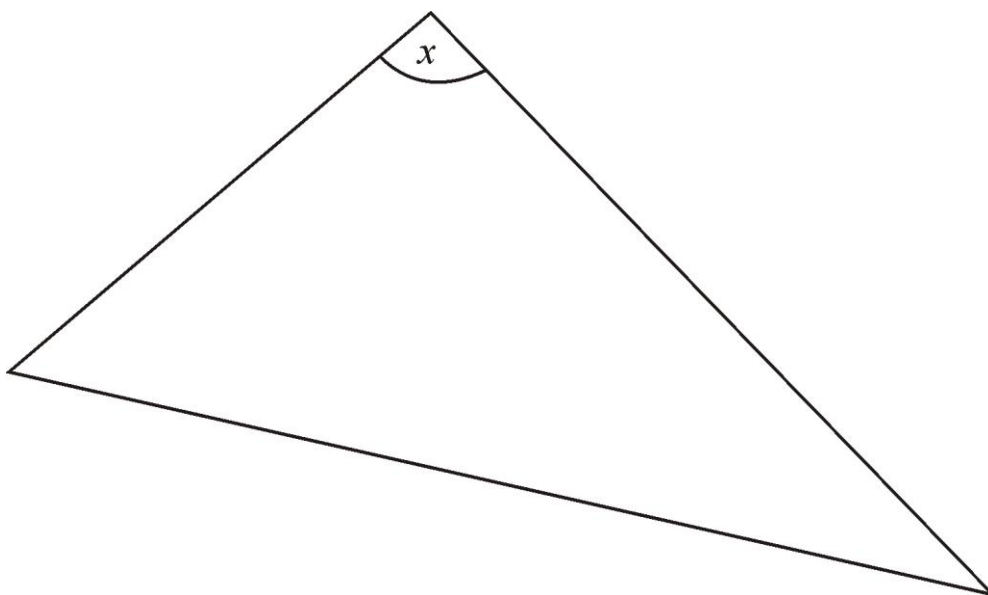
_____

Q5.

Kirsty says,

> When you double the size of an acute angle, you always get an obtuse angle.
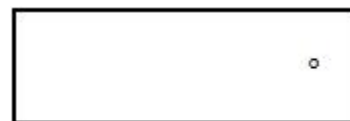
Explain why Kirsty is **not** correct.

1 mark

Q6.

Measure angle x accurately.
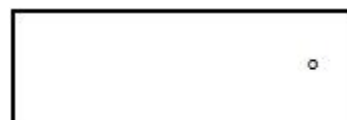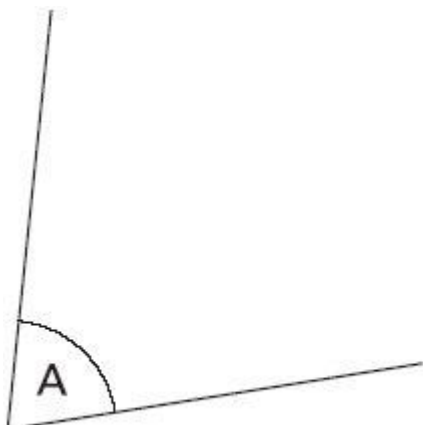
Use a protractor (angle measurer).

°

1 mark

Q7.

Measure **angle A** accurately.

Use a protractor (angle measurer).

angle A

°

1 mark

Q8.

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

$$\begin{matrix} \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet & \bullet & \bullet \end{matrix}$$

1 mark

Q9.
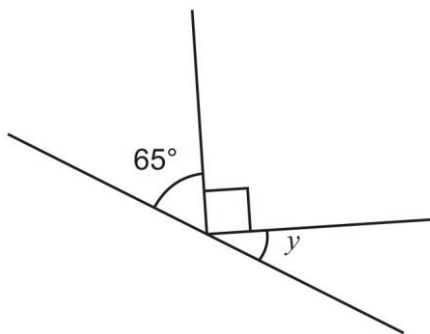
Not to scale

Calculate the size of angle y in this diagram.

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

```
                          °
```

1 mark

Mark schemes

Q1.

2 **AND** 4

> *Accept alternative unambiguous indications, eg right angles marked on diagrams.*

[1]
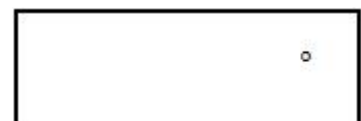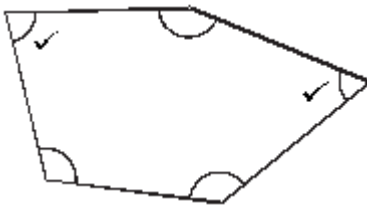
Q2.

A **AND** D

> *Letters may be given in either order.*

[1]

Q3.

Two angles ticked as shown:

> ***Do not*** *award the mark if additional incorrect angles are ticked.*
>
> *Accept alternative unambiguous indications of the correct angles, eg angles circled.*

[1]

Q4.

(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]

Q5.

An explanation that includes a correct counter example, e.g.

- When you double 10° it is not obtuse
- 2 × 27° = 54°
- Double 45° is a right angle not obtuse

OR

An explanation that demonstrates where the statement in the question is not correct, e.g.

• If the acute angle is less than 45° then doubling it will be less than 90°, so it won't be obtuse (more than 90°).

> *Do not* accept vague or incomplete explanations, e.g.
> • *Sometimes it will be acute*
> • *Some acute angles are half an obtuse angle, but not all*
> • *When you double an acute angle, you get a right angle*
>
> *Do not* accept explanations which include incorrect mathematics or incorrect information that is relevant to the explanation, e.g.
> • *20°C × 2 = 40°C*
> • *20% × 2 = 40%*

[1]

Q6.

Answer in the range 93 degrees to 97 degrees inclusive
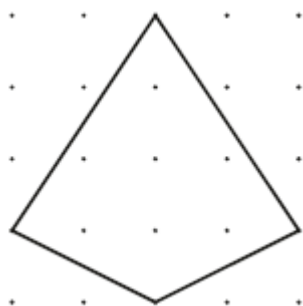
[1]

Q7.

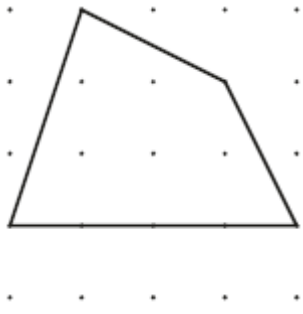Answers in the range 74° to 76° inclusive.

[1]

Q8.

A quadrilateral with three acute angles, e.g.

OR

OR

Accept inaccurate drawing provided the intention is clear.

[1]

Q9.

25

[1]