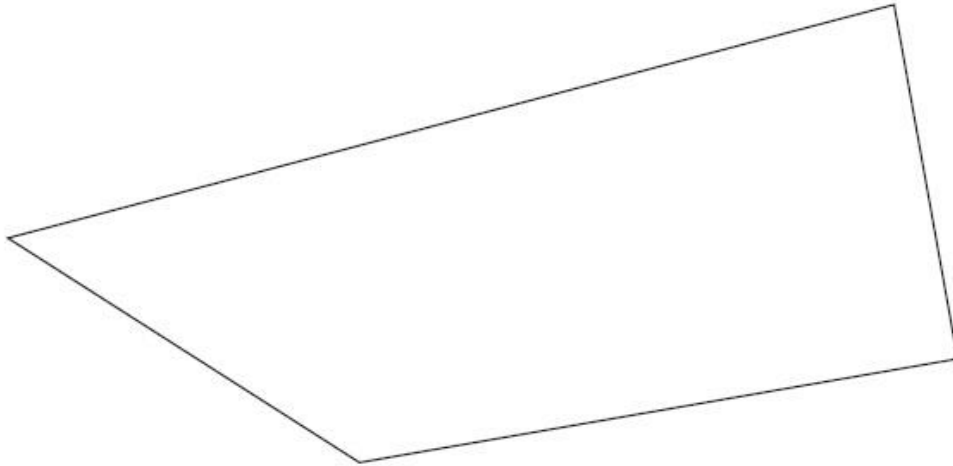


Q1.

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

Tick (✓) the obtuse angle.

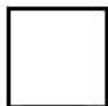
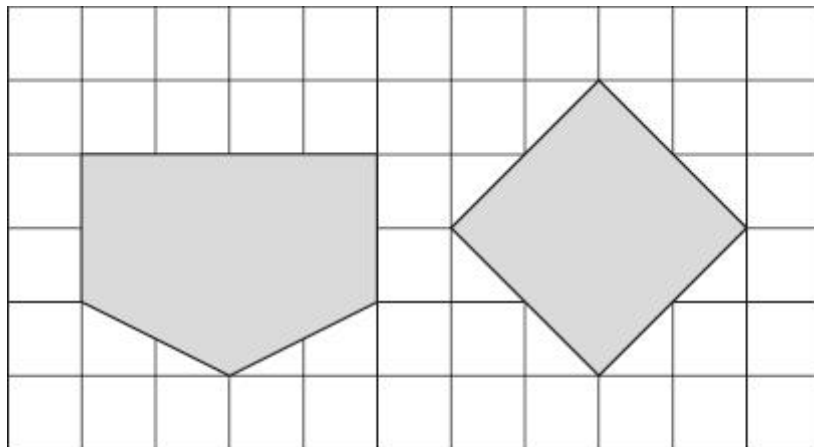


1 mark

Q2.

Here are two shapes on a square grid.

For each shape, write how many **right angles** it has.

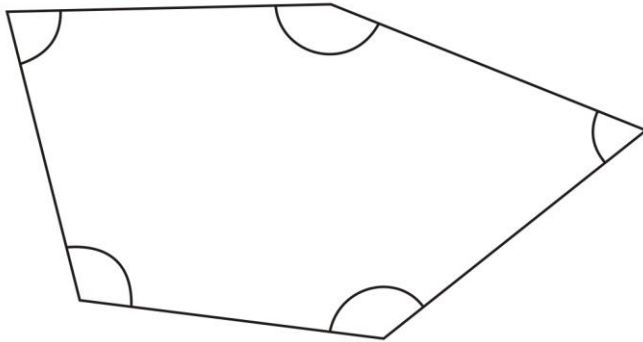


1 mark

Q3.

Look at this shape.

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



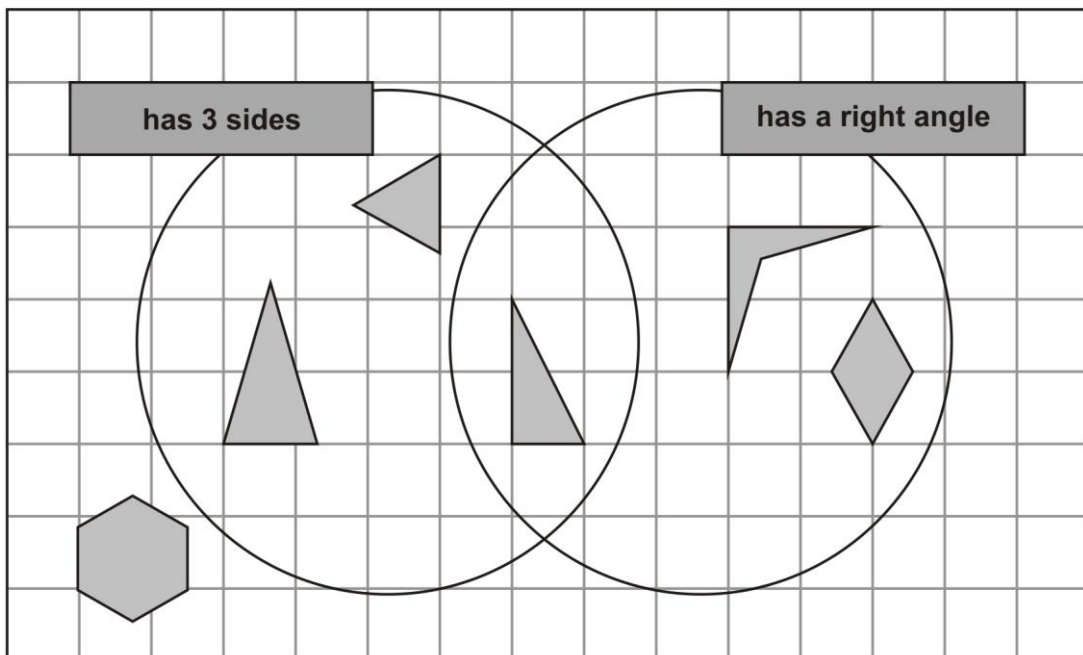
1 mark

Q4.

Here is a diagram for sorting shapes.

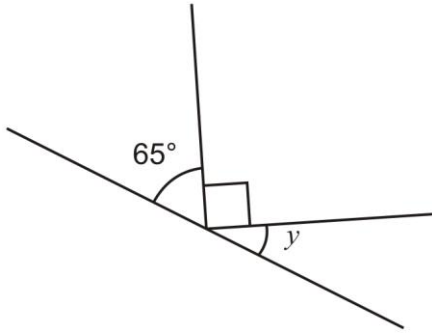
One of the shapes is in the wrong place.

Put a cross (X) on it.



1 mark

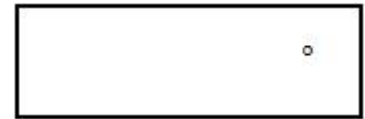
Q5.



Not to scale

Calculate the size of angle y in this diagram.

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



1 mark

Q6.

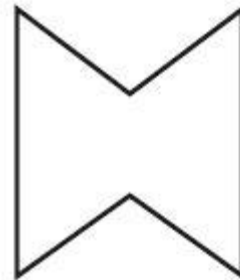
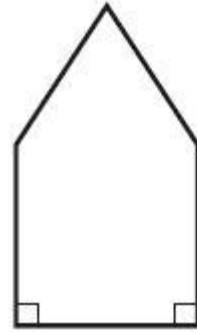
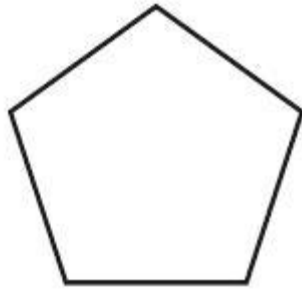
Join dots on the grid to make a quadrilateral that has **3 acute** angles.



1 mark

Q7.

Circle the **pentagon** with exactly **four acute** angles.



1 mark

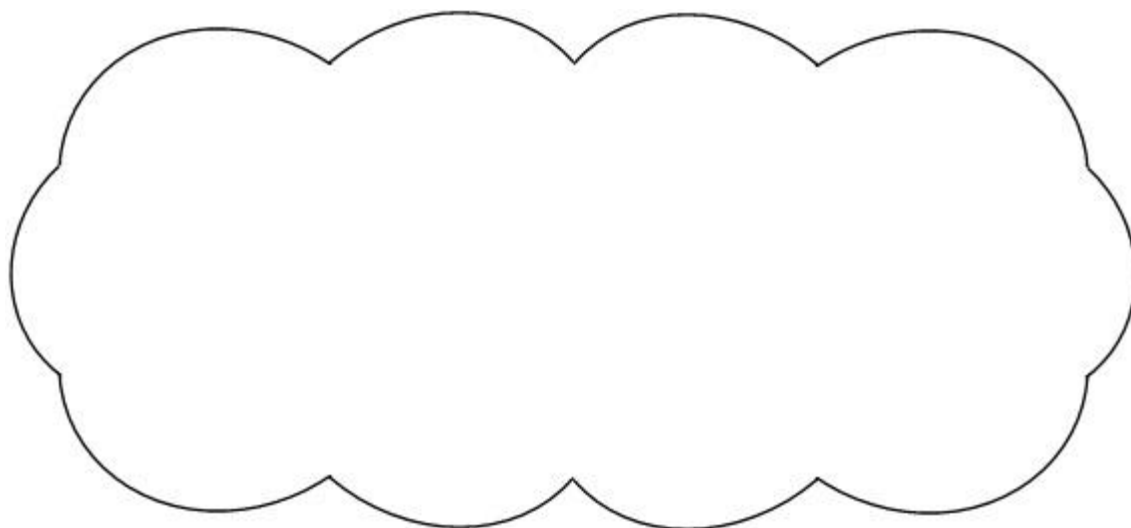
Q8.

Kirsty says,



When you double the size of an acute angle, you always get an obtuse angle.

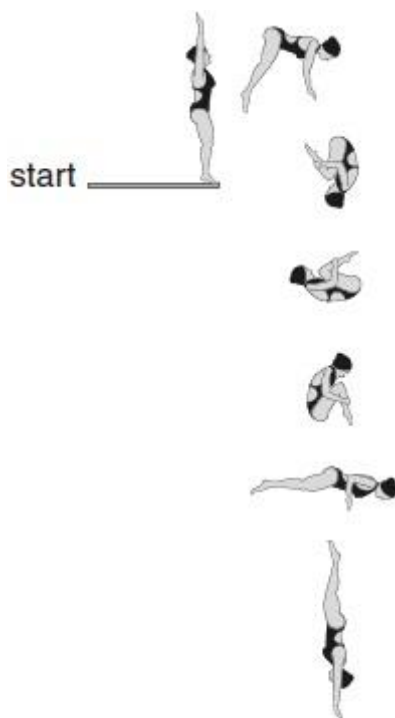
Explain why Kirsty is **not** correct.



1 mark

Q9.

Layla completes one-and-a-half somersaults in a dive.



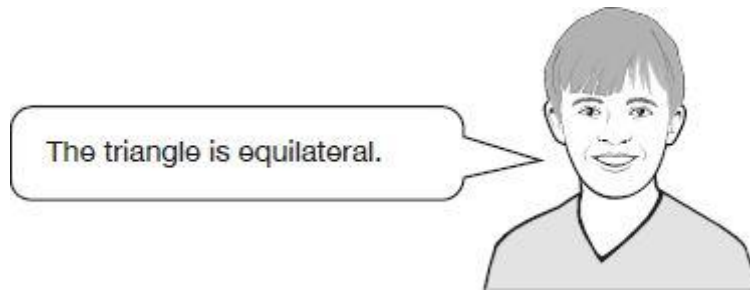
How many **degrees** does Layla turn through in her dive?

1 mark

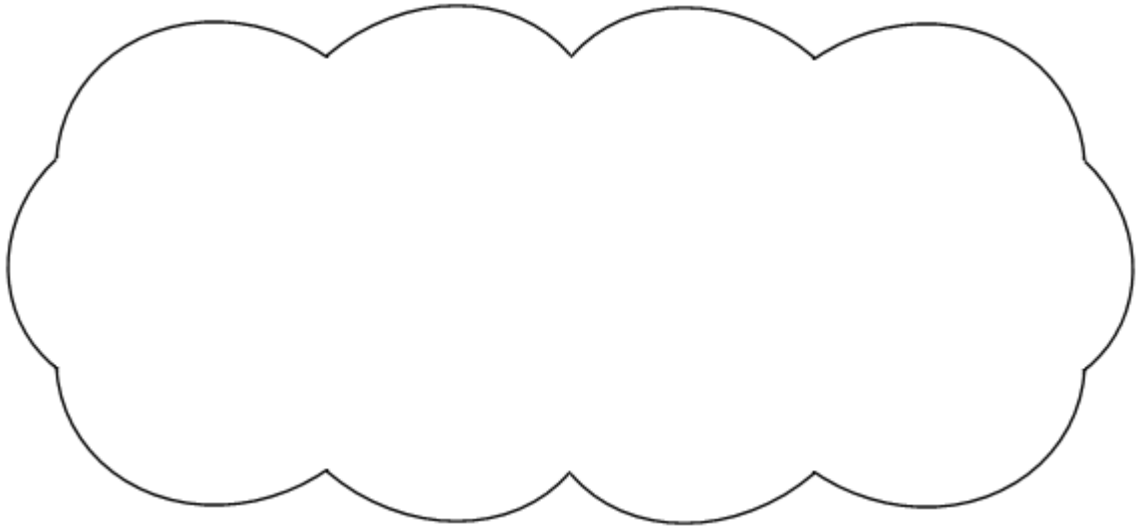
Q10.

Two of the angles in a triangle are 70° and 40°

Jack says,



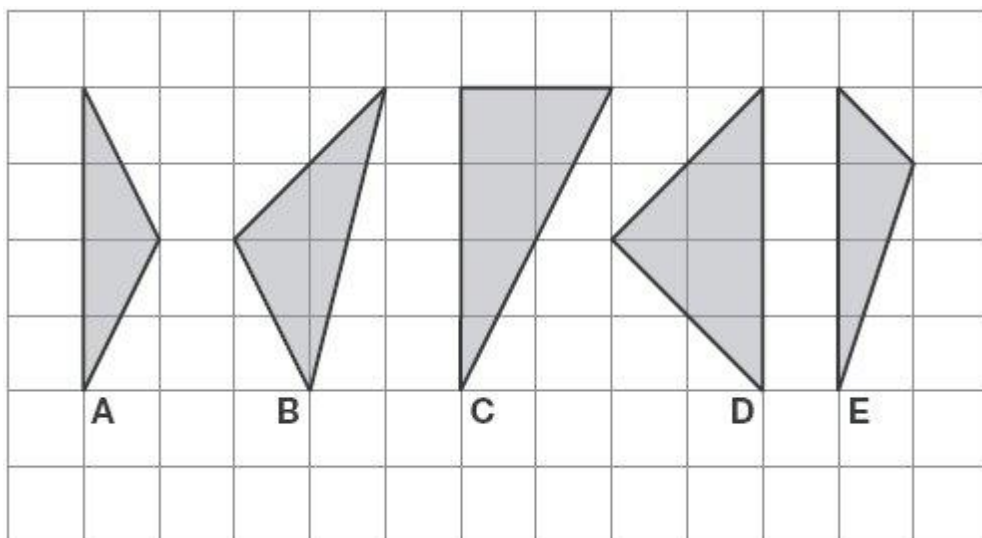
Explain why Jack is **not** correct.



1 mark

Q11.

Here are five shaded triangles on a square grid.



Write the letter of each triangle that has a **right angle**.

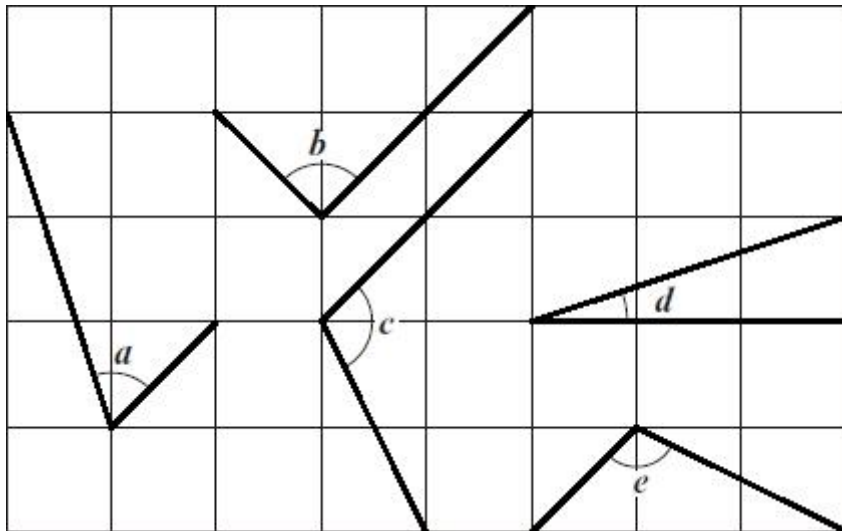
1 mark

Write the letter of each triangle that has **two equal sides**.

1 mark

Q12.

Here are five angles marked on a grid of squares.



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

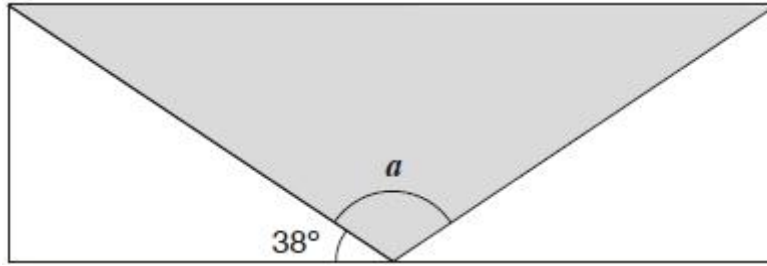
_____ 1 mark

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

_____ 1 mark

Q13.

A shaded **isosceles** triangle is drawn inside a rectangle.



Not to scale

Calculate the size of angle a .

Show your method

2 marks

Q14.

Anna has four **different** triangles.

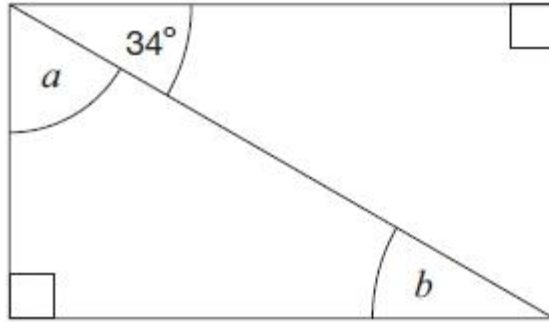
Complete the table to show the size of the angles in each triangle.

Type of triangle	Angle 1	Angle 2	Angle 3
Isosceles	90°		
Right-angled	80°		
Isosceles	70°		
Isosceles	70°		

2 marks

Q15.

Here is a rectangle.



Not to scale

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

Do **not** measure the angles.

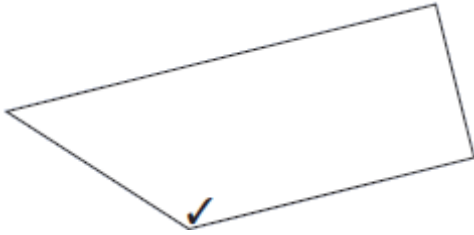
a = 1 mark

b = 1 mark

Mark schemes

Q1.

Correct angle indicated as shown:



Accept alternative unambiguous indications, eg correct angle crossed or circled.

[1]

Q2.

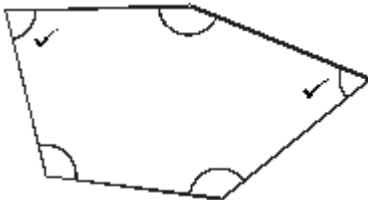
2 AND 4

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

[1]

Q3.

Two angles ticked as shown:



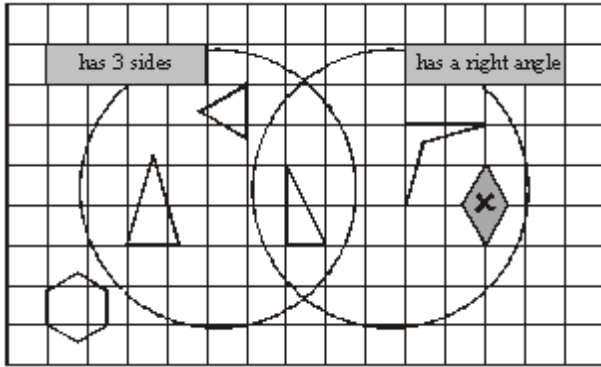
Do not award the mark if additional incorrect angles are ticked.

Accept alternative unambiguous indications of the correct angles, eg angles circled.

[1]

Q4.

One shape crossed as shown:



Do not award the mark if additional incorrect shapes are indicated.

Accept alternative unambiguous indications of the correct shape, eg shape ticked or circled.

[1]

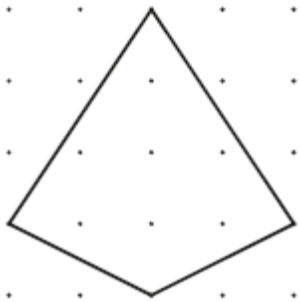
Q5.

25

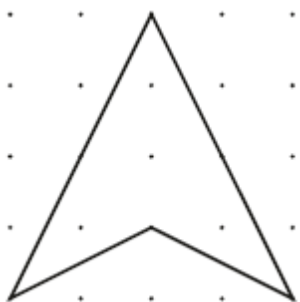
[1]

Q6.

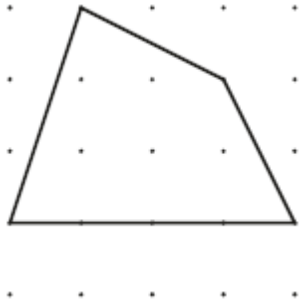
A quadrilateral with three acute angles, e.g.



OR



OR

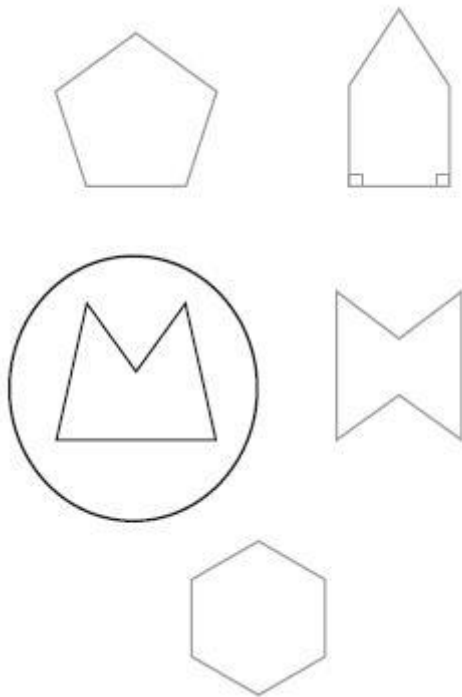


Accept inaccurate drawing provided the intention is clear.

[1]

Q7.

The correct shape circled as shown:



Accept alternative unambiguous positive indications, e.g. shape ticked.

[1]

Q8.

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

- When you double 10° it is not obtuse
- $2 \times 27^\circ = 54^\circ$
- 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.

- $20^\circ\text{C} \times 2 = 40^\circ\text{C}$
- $20\% \times 2 = 40\%$

[1]

Q9.

540

[1]

Q10.

An explanation showing an understanding:

- that this specific triangle has angles 70, 70 and 40

OR

- of the properties of an equilateral triangle – all angles are equal (60°)

and therefore that this triangle cannot be equilateral, e.g.

- The angles aren't 60°
- There is not a 60° angle
- It has two different angles (70° and 40°) so it can't be equilateral
- The angles aren't the same
- An equilateral triangle has $60^\circ + 60^\circ + 60^\circ$
- All the angles are the same in an equilateral triangle
- It's an isosceles triangle.

(In the context of this question, the term isosceles triangle is treated as not including equilateral triangles as a special type, as the national curriculum does not specify this at key stage 2.)

Do not accept vague or incomplete explanations, e.g.

- The other angle is 70°
- They aren't (all) the same. (No reference to angles)
- An equilateral triangle has equal angles. (Does not say all.)

Do not accept explanations which include incorrect mathematics or incorrect information that is relevant to the explanation, e.g.

- $40 + 70 = 110 + 70 = 180$

[1]

Q11.

(a) C AND D

Letters may be given in either order.

(b) A AND D

Letters may be given in either order.

1

1

[2]

Q12.

(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]

Q13.

Award **TWO** marks for the correct answer of 104° .

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

- $180 - 38 - 38 = a$

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

Up to 2

[2]

Q14.

Completes all four rows of the table correctly, eg:

90°	45°	45°
80°	90°	10°
70°	70°	40°
70°	55°	55°

Accept angles within a row in either order

Accept the bottom two rows may be given in either order

! Condone omission of degree signs

! For 2 marks, do not accept correct angles in 3rd row repeated in 4th row, in either order

2

or

Completes three rows correctly

1

Q15.

(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