



### Q1.

Anna has four **different** triangles.

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

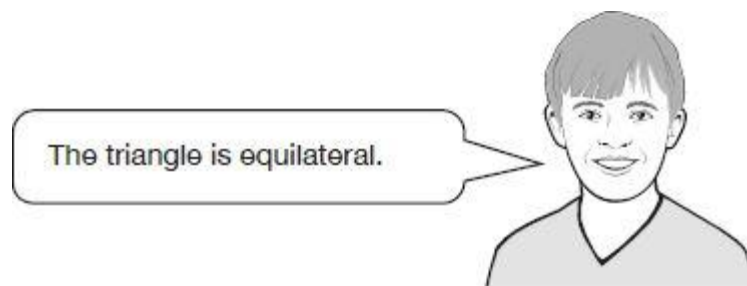
| Type of triangle | Angle 1    | Angle 2 | Angle 3 |
|------------------|------------|---------|---------|
| Isosceles        | $90^\circ$ |         |         |
| Right-angled     | $80^\circ$ |         |         |
| Isosceles        | $70^\circ$ |         |         |
| Isosceles        | $70^\circ$ |         |         |

2 marks

### Q2.

Two of the angles in a triangle are  $70^\circ$  and  $40^\circ$

Jack says,



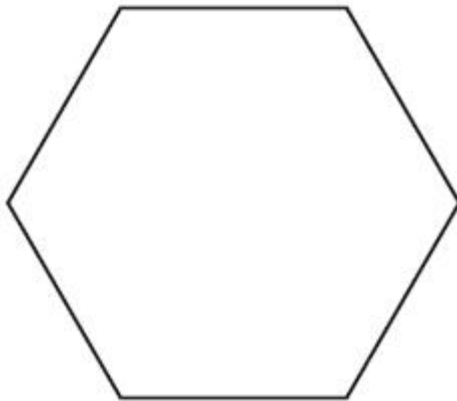
Explain why Jack is **not** correct.

1 mark

**Q3.**

Here is a hexagon.

Draw **two** straight lines across the hexagon to make two triangles and two quadrilaterals.



1 mark

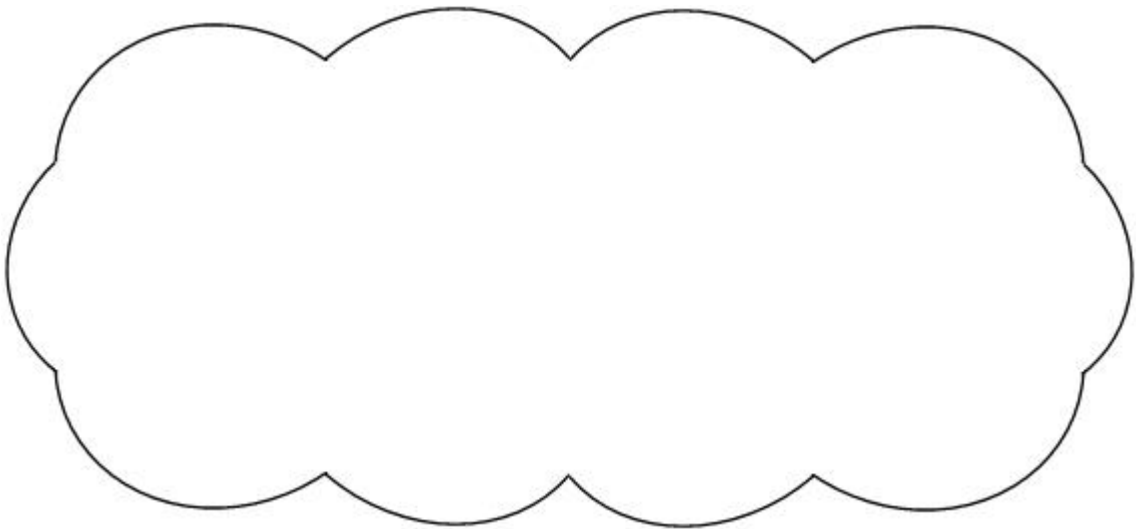
**Q4.**

Jamie draws a triangle.

He says,

***'Two of the three angles in my triangle are obtuse'.***

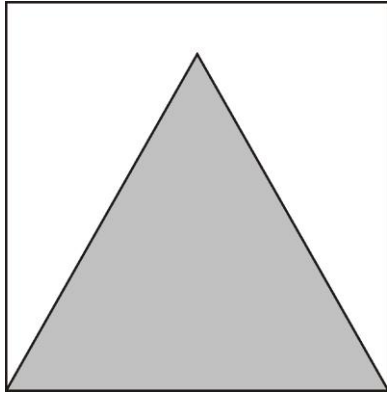
Explain why Jamie **cannot** be correct.



1 mark

**Q5.**

Here is an equilateral triangle inside a square.



Not actual size

The perimeter of the triangle is 48 centimetres.

What is the perimeter of the **square**?

Show  
your  
method

cm

2 marks

### Q6.

An isosceles triangle has a perimeter of 12 cm.

One of its sides is 5 cm.

What could the length of each of the other two sides be?

Two different answers are possible.

Give **both** answers.

cm

and

cm

cm

and

cm

2 marks

## Mark schemes

### Q1.

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 3<sup>rd</sup> row repeated in 4<sup>th</sup> row, in either order*

2

**or**

Completes three rows correctly

1

[2]

### Q2.

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° + 60° + 60°
- 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.)*

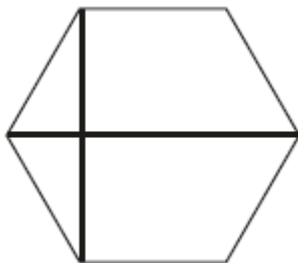
**Do not** accept explanations which include incorrect mathematics or incorrect information that is relevant to the explanation, e.g.

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

[1]

**Q3.**

Diagram completed as shown:



OR



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

Diagrams may be completed in any orientation.

U1

[1]

**Q4.**

An explanation (or diagram) which recognises that the sum of two obtuse angles would be greater than 180 degrees, eg:

- 'An obtuse angle is greater than 90 degrees and the angles of a triangle add up to 180 degrees'
- 'Two obtuse angles add up to more than 180'
- '180 degrees is less than two obtuse angles'
- 'It must have at least two acute angles'
- 'The shape would need more than 3 sides to join up'
- 



**Do not** accept answers that refer only to the properties of obtuse angles **OR** to the angles of a triangle, eg:

- 'The angles of a triangle add up to 180 degrees'
  - 'Obtuse angles are greater than 90 degrees'.
- Do not** accept vague or incomplete explanations, eg:
- 'A triangle cannot have two obtuse angles'
  - 'Obtuse angles would be too big'
  - 'You can only have acute angles'.

U1

[1]

**Q5.**

Award **TWO** marks for the correct answer of 64

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

$$48 \div 3 = 16$$

$$16 \div 4 = \text{wrong answer}$$

*Calculation must be performed for the award of **ONE** mark.*

Up to 2 (U1)

[2]

**Q6.**

Award **TWO** marks for two different answers as shown:

**5** and **2** or **2** and **5**

**AND**

**3.5** and **3.5**

If the answer is incorrect, award **ONE** mark for any one of the above answers.

***The two answers may be given in either order.***

***Do not*** accept '5 and 2' **AND** '2 and 5' for two marks.

Up to 2

[2]