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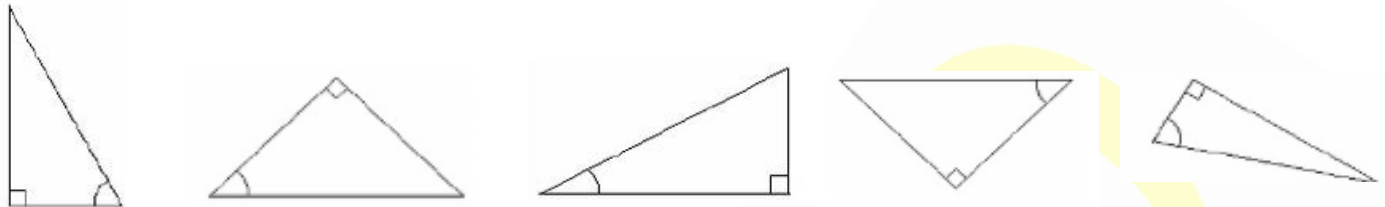
Geometry – Pythagoras' theorem – Pythagoras' theorem

Recap

1. The three sides of potential triangles are shown below. Determine whether they do, indeed, form a triangle.

Side One (cm)	Side Two (cm)	Side Three (cm)	✓ or X
6	8	20	
5	4	7	
18	6	11	
28	29	50	

Core

1. Define Pythagoras' theorem

2. On each of the following triangles, label the hypotenuse as c:

3. Match the equation to the description:

$$a^2 + b^2 = c^2$$ acute angle

$$a^2 + b^2 < c^2$$ obtuse angle

$$a^2 + b^2 > c^2$$ right angle

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4. A triangle has sides of length 5cm, 6cm and 7cm. Determine, with full working, whether the largest angle is acute, obtuse or 90°.

5. A triangle has sides of length 4cm, 8cm and 11cm. Determine, with full working, whether the largest angle is acute, obtuse or 90°.

6. A triangle has sides of length 5cm, 12cm and 13cm. Determine, with full working, whether the largest angle is acute, obtuse or 90°.

7. Prove that a triangle with sides of length 9cm, 12cm and 15cm is right-angled.