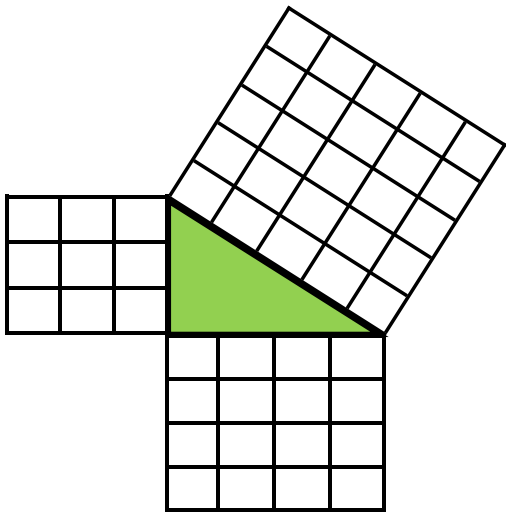
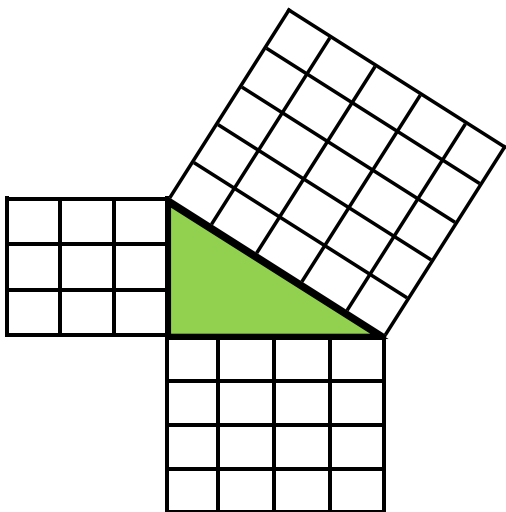


The Pythagorean Theorem

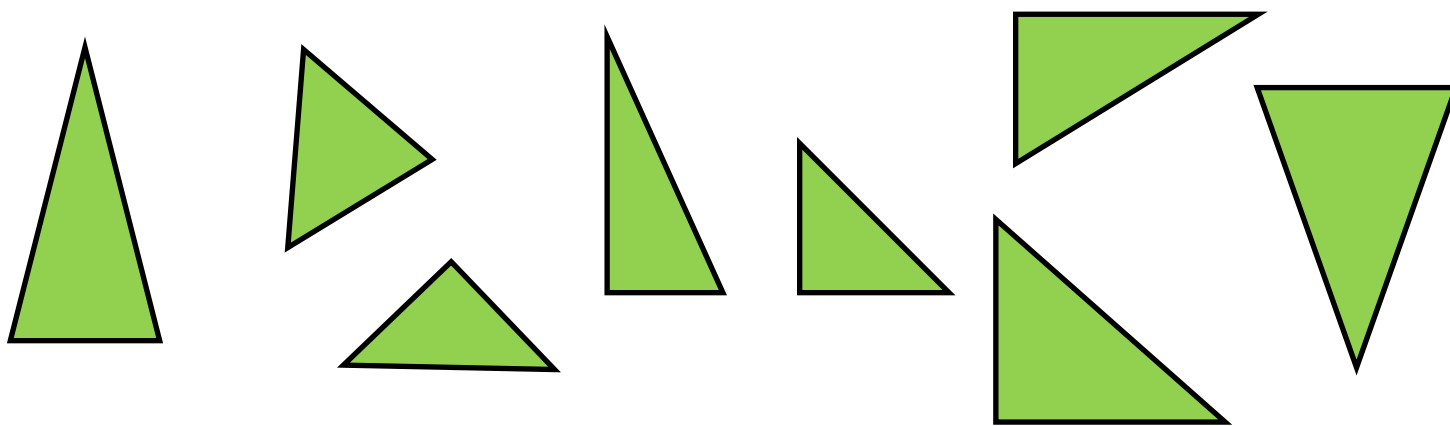


The Pythagorean Theorem



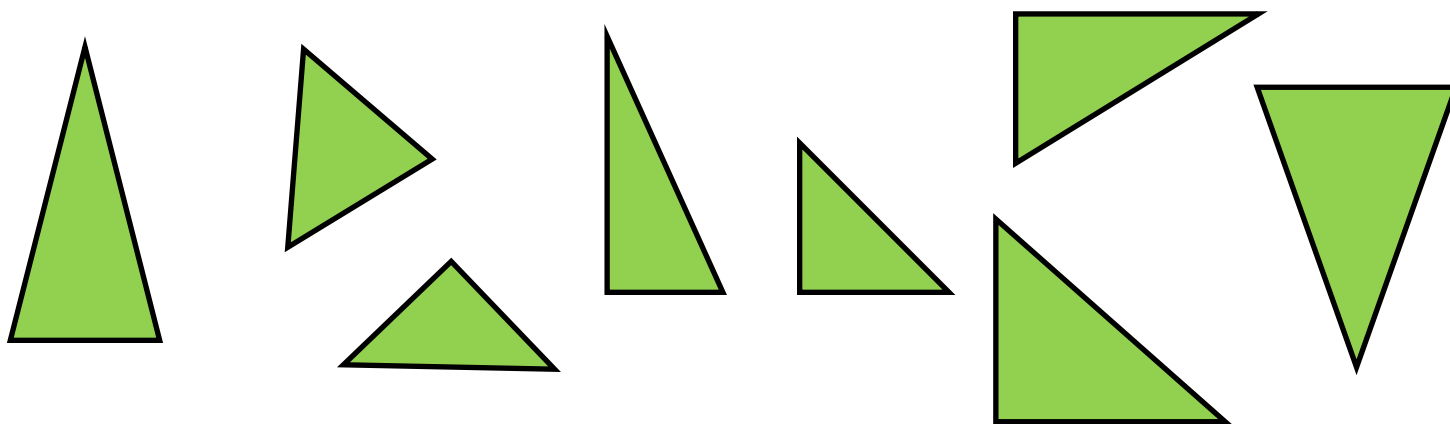
The Pythagorean Theorem

Circle the right triangles



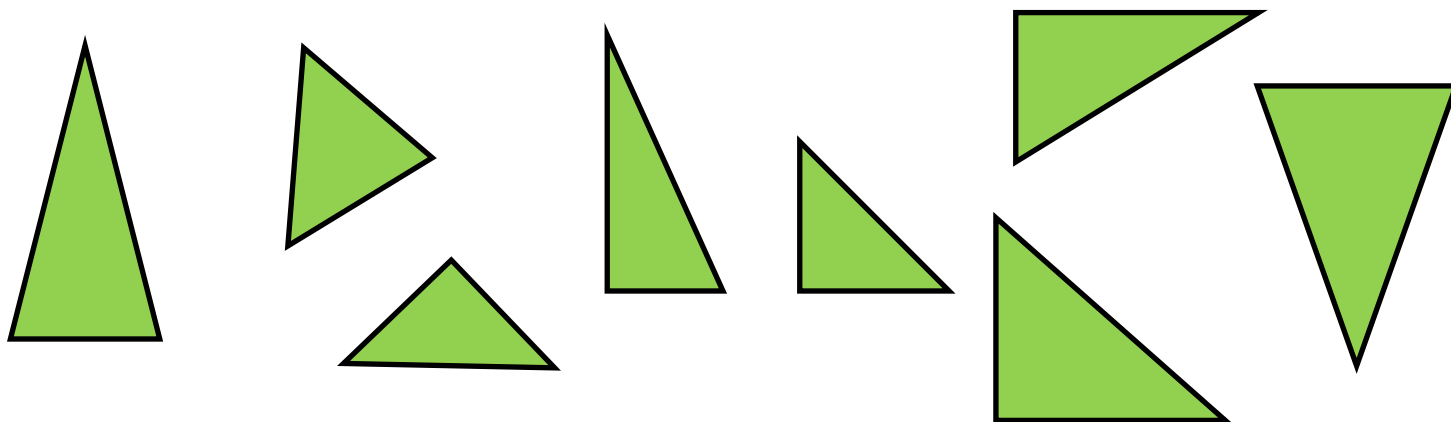
The Pythagorean theorem and the formula $a^2 + b^2 = c^2$ apply only to right triangles.

Circle the right triangles



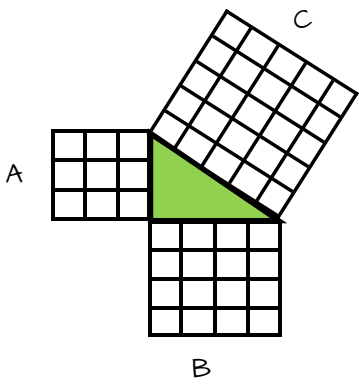
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Circle the right triangles



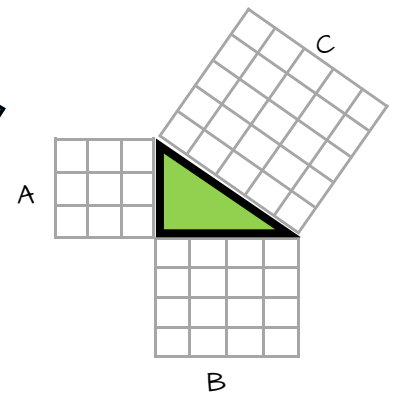
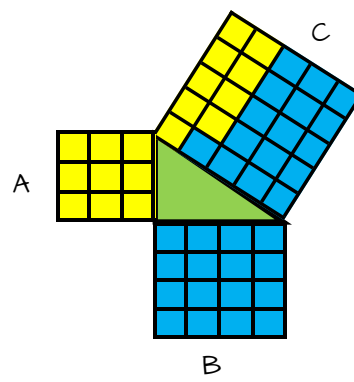
The Pythagorean theorem and the formula $a^2 + b^2 = c^2$ apply only to right triangles.

The relationship $a^2 + b^2 = c^2$ describes how the sum of the area of squares a and b are equal to the area of square c.

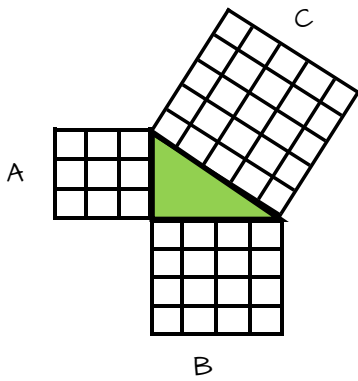


To find the area of a square we multiply the length by the width or side a x side a.

A number multiplied by itself is also written with an exponent to 2.

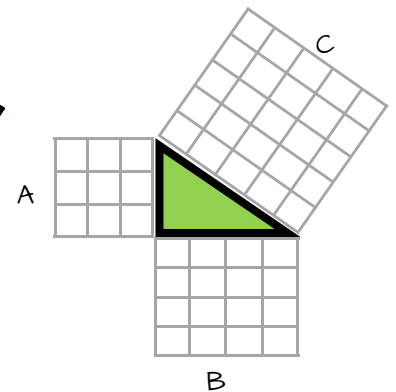
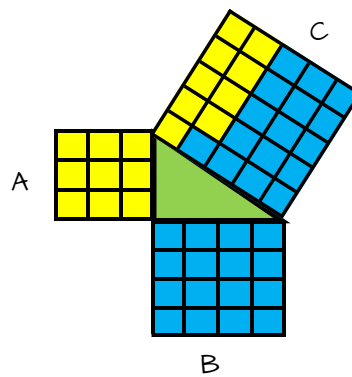


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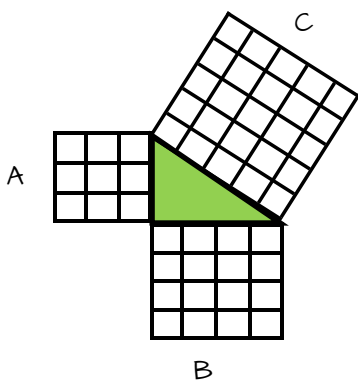


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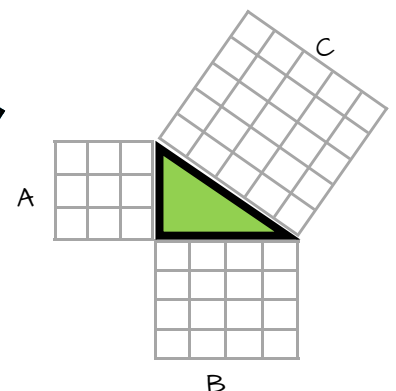
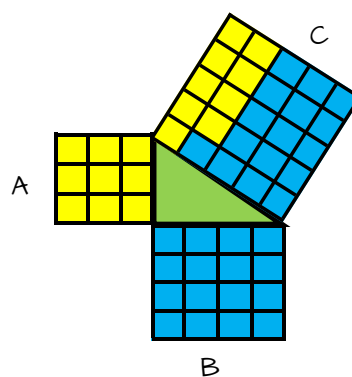


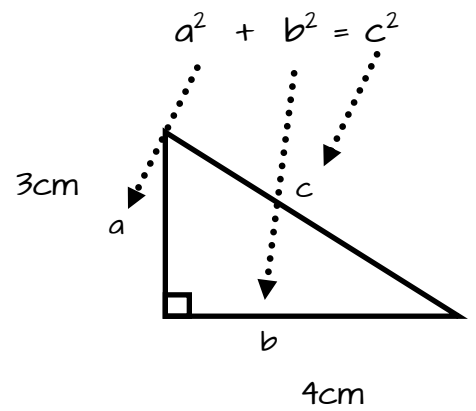
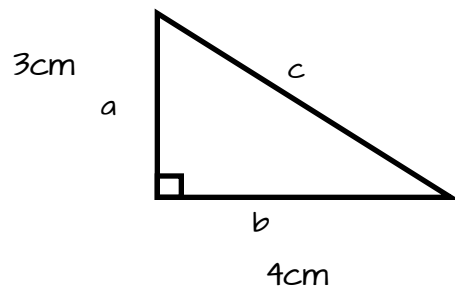
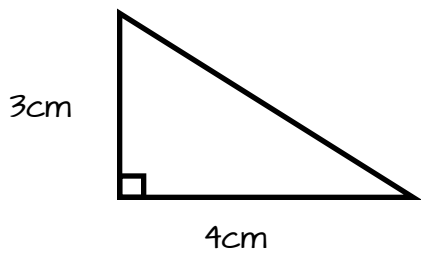
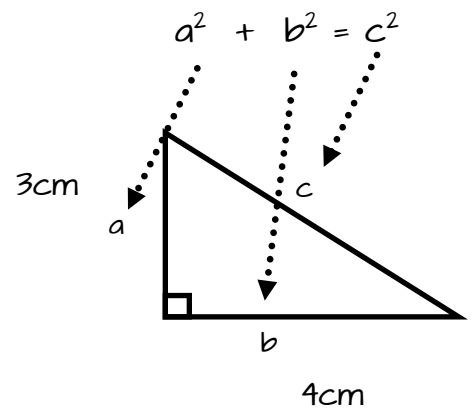
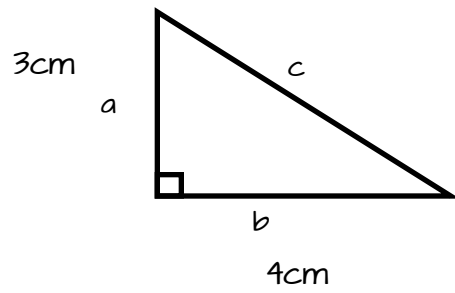
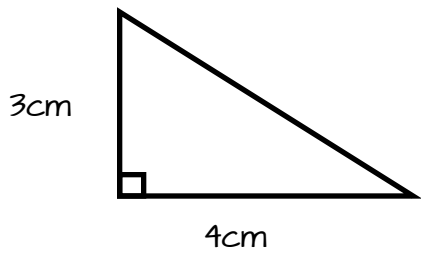
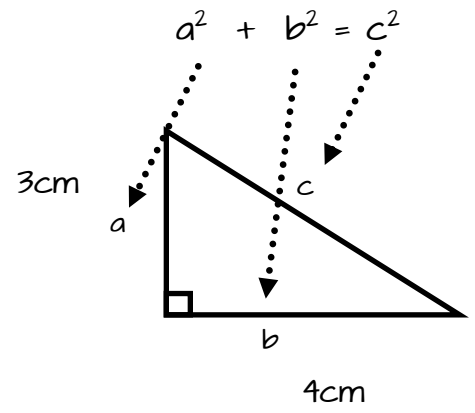
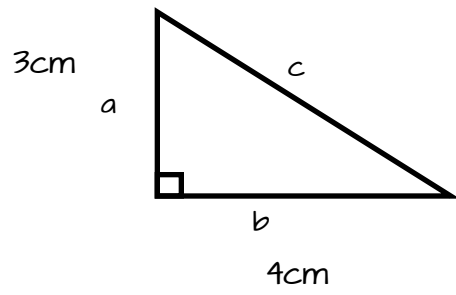
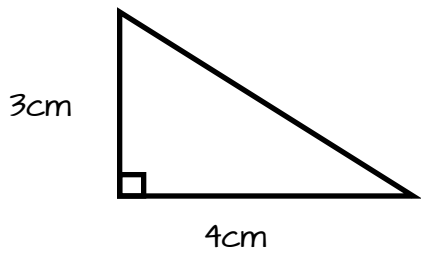
The relationship $a^2 + b^2 = c^2$ describes how the sum of the area of squares a and b are equal to the area of square c.



To find the area of a square we multiply the length by the width or side a x side a.

A number multiplied by itself is also written with an exponent to 2.





Formula

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

(Substitute the variables)

$$(3)^2 + (4)^2 = c^2$$

Calculate

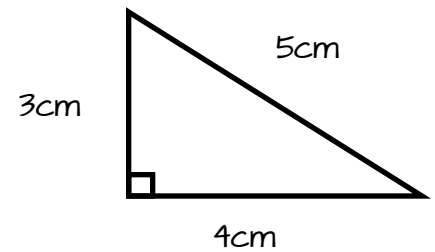
$$9 + 16 = c^2$$

$$25 = c^2$$

$$\sqrt{25} = \sqrt{c^2}$$

Solution

$$5 = c$$



Formula

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

(Substitute the variables)

$$(3)^2 + (4)^2 = c^2$$

Calculate

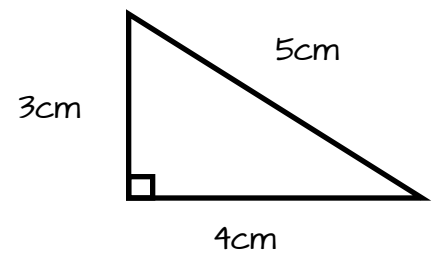
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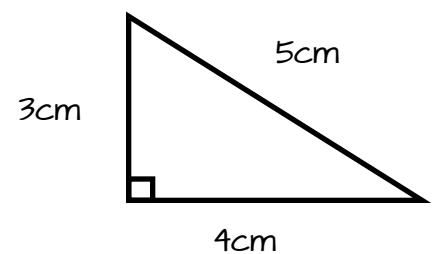
$$9 + 16 = c^2$$

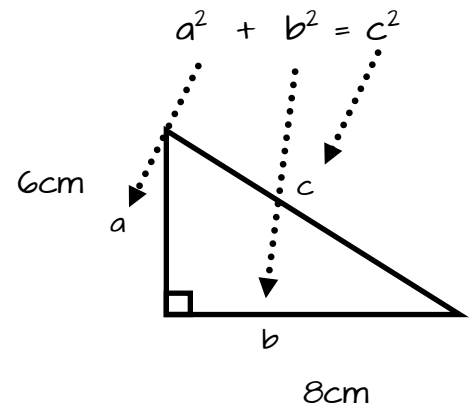
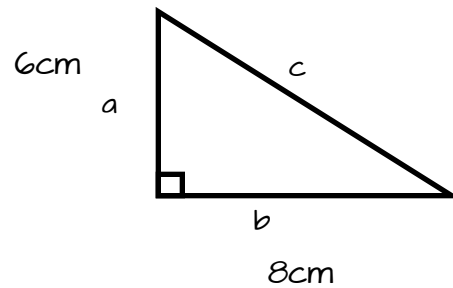
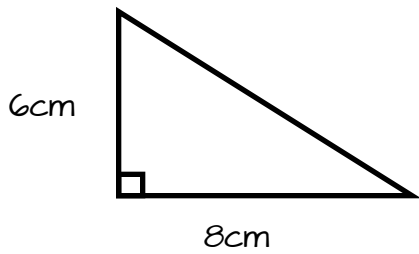
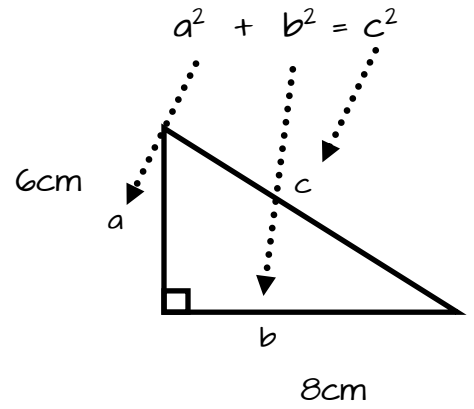
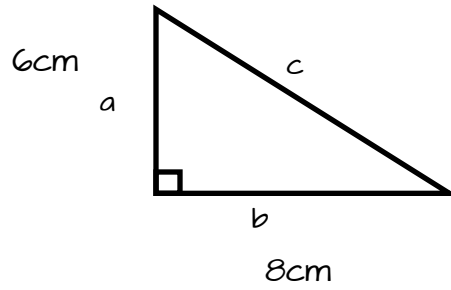
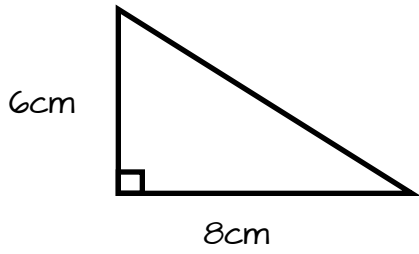
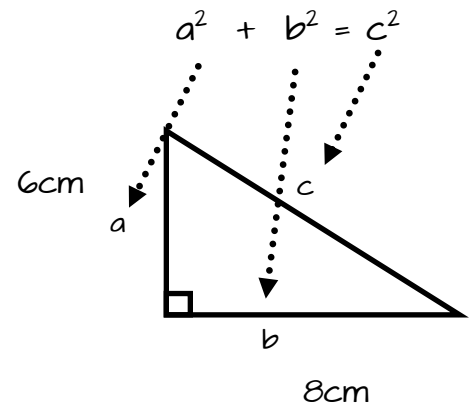
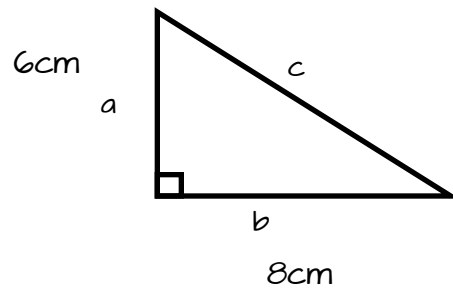
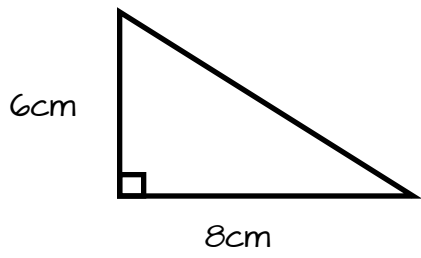
$$25 = c^2$$

$$\sqrt{25} = \sqrt{c^2}$$

Solution

$$5 = c$$





Formula

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

(Substitute the variables)

$$(6)^2 + (8)^2 = c^2$$

Calculate

Find the squares

$$\square + \square = c^2$$

Find the sum

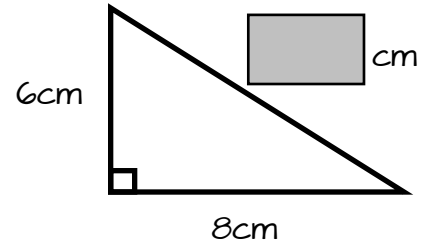
$$\square = c^2$$

Square root each side

$$\sqrt{\square} = \sqrt{c^2}$$

Solution

$$\square = c$$



Formula

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

(Substitute the variables)

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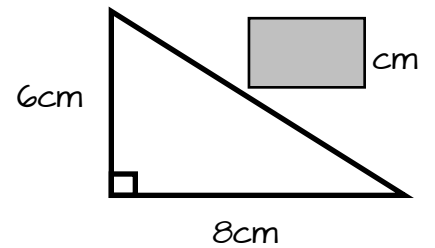
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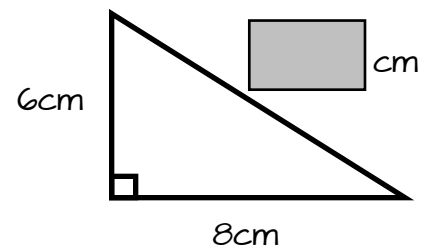
$$\square = c^2$$

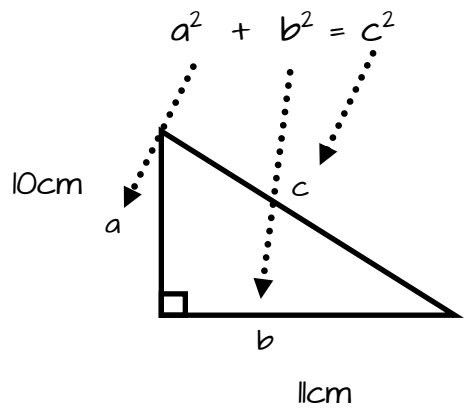
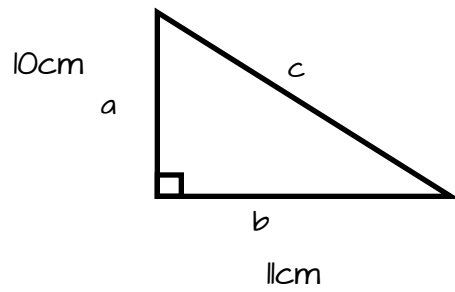
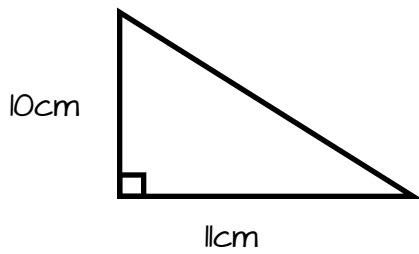
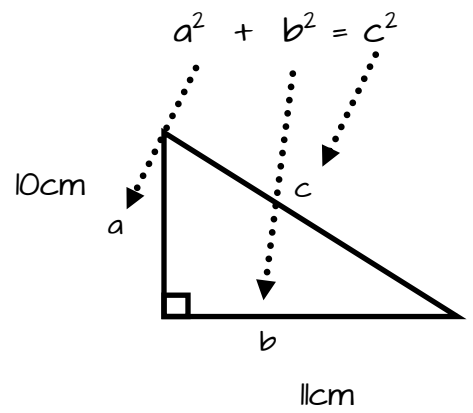
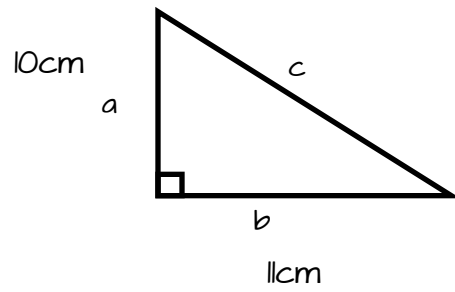
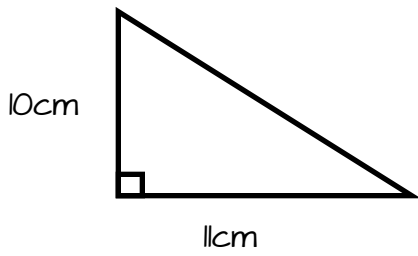
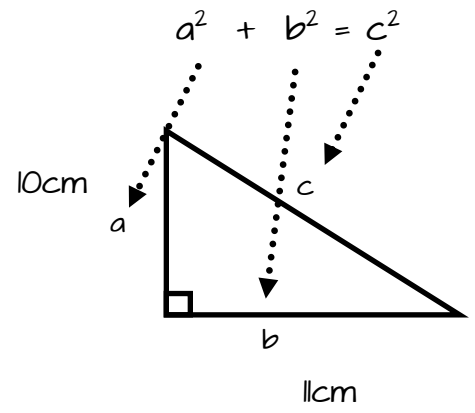
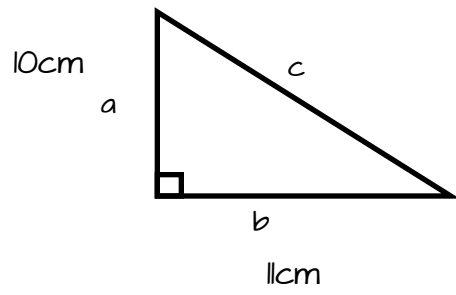
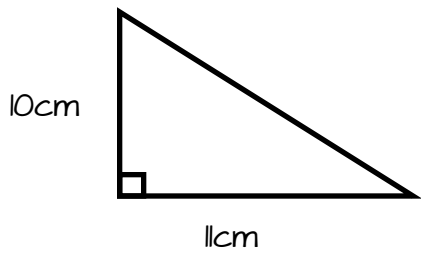
Square root each side

$$\sqrt{\square} = \sqrt{c^2}$$

Solution

$$\square = c$$





Formula

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

(Substitute the variables)

$$(10)^2 + (11)^2 = c^2$$

Calculate

Find the squares

$$\square + \square = c^2$$

Find the sum

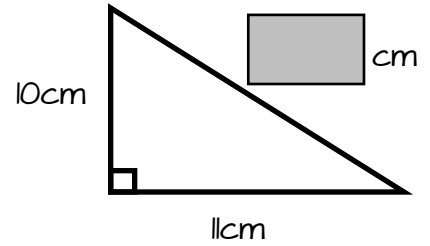
$$\square = c^2$$

Square root each side

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Solution

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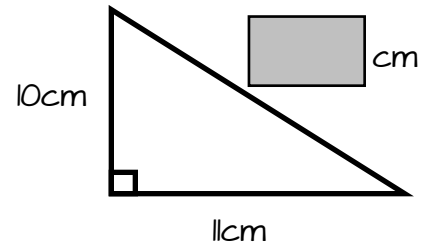
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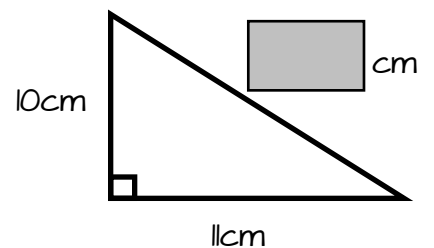
$$\square = c^2$$

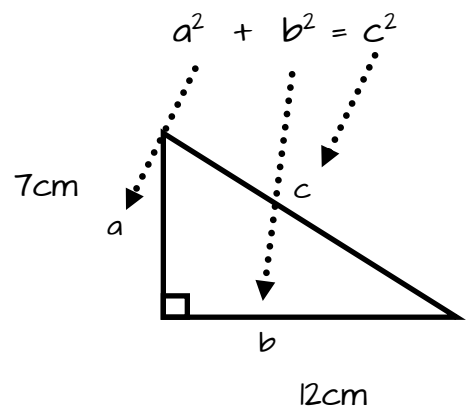
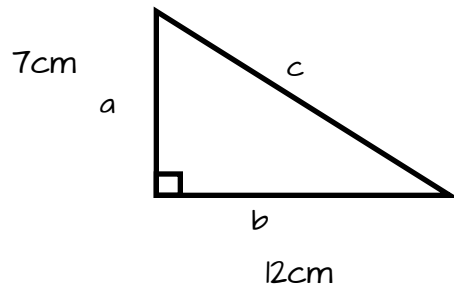
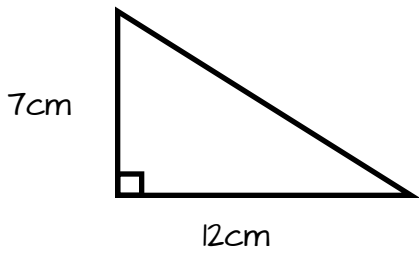
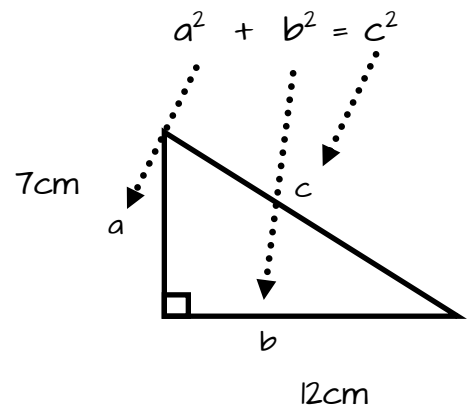
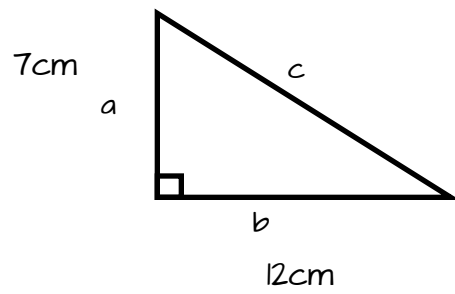
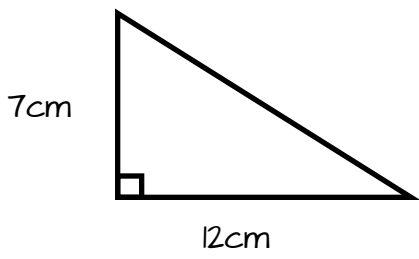
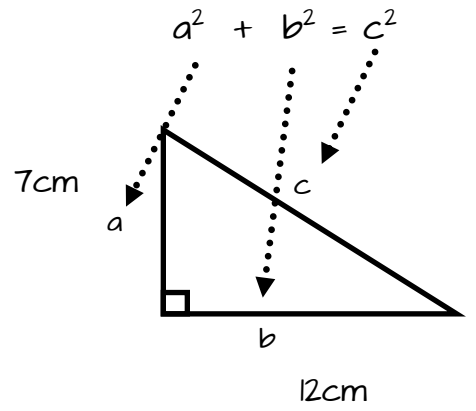
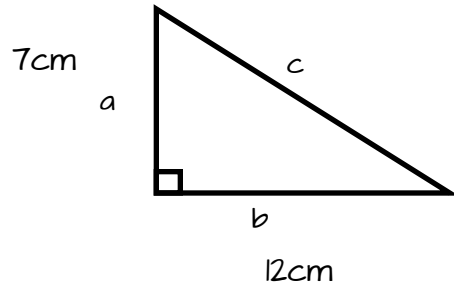
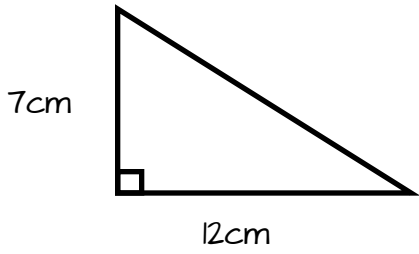
Square root each side

$$\sqrt{\square} = \sqrt{c^2}$$

Solution

$$\square = c$$





Formula
(Substitute the variables)

$$a^2 + b^2 = c^2$$
$$(7)^2 + (12)^2 = c^2$$

Calculate

Find the squares

$$\square + \square = c^2$$

Find the sum

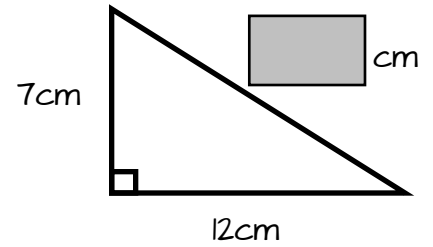
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Square root each side

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Solution

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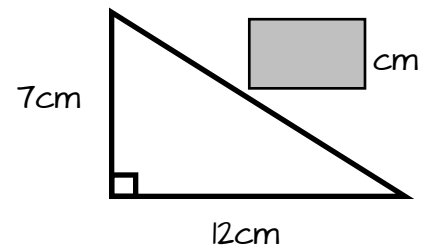
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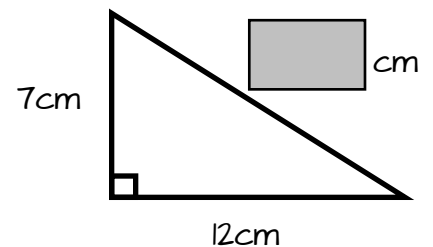
$$\square = c^2$$

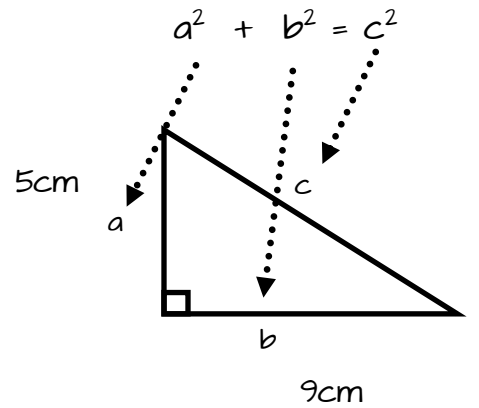
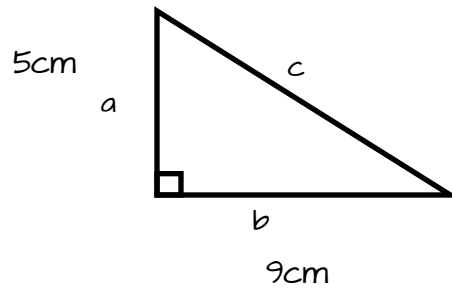
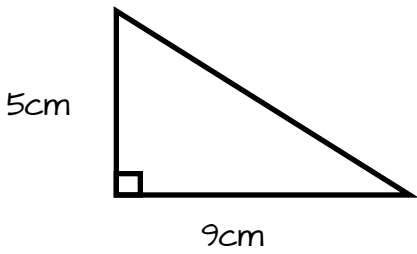
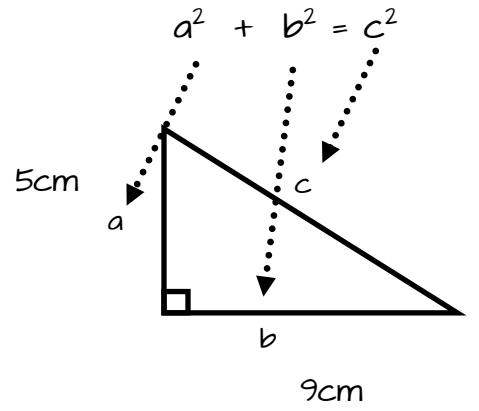
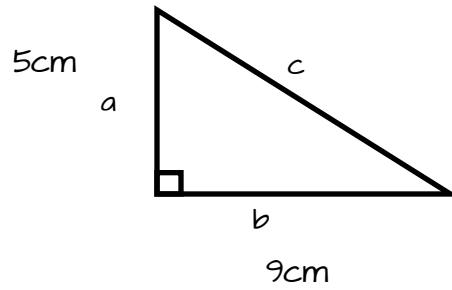
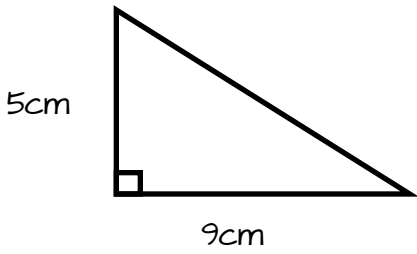
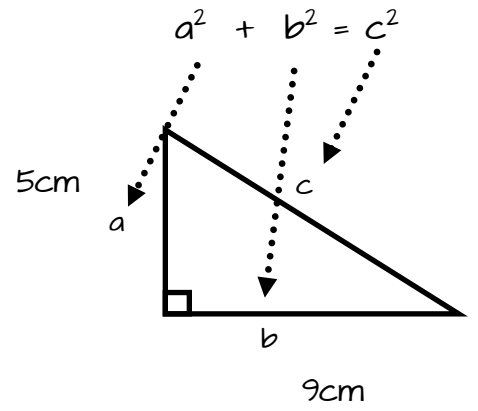
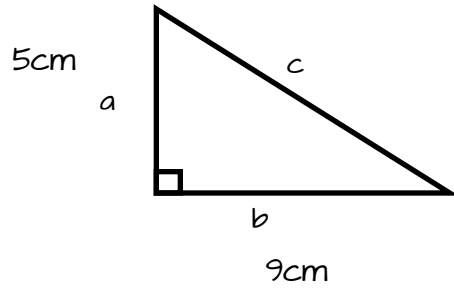
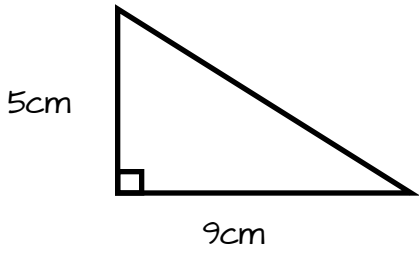
Square root each side

$$\sqrt{\square} = \sqrt{c^2}$$

Solution

$$\square = c$$





Formula
(Substitute the variables)

$$a^2 + b^2 = c^2$$
$$(5)^2 + (9)^2 = c^2$$

Calculate

Find the squares

$$\square + \square = c^2$$

Find the sum

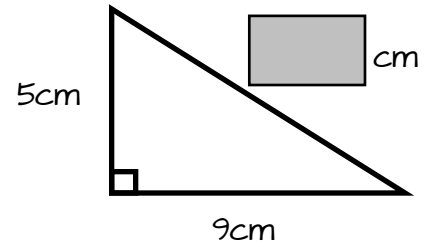
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Square root each side

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(Substitute the variables)

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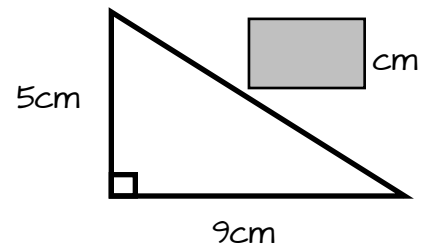
$$\square = c^2$$

Square root each side

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(Substitute the variables)

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$$\square + \square = c^2$$

Find the sum

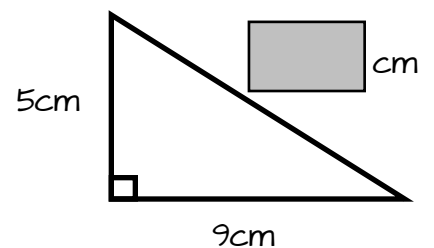
$$\square = c^2$$

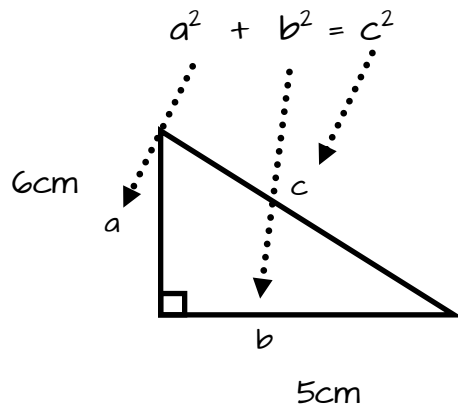
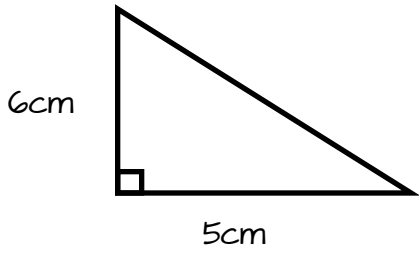
Square root each side

$$\sqrt{\square} = \sqrt{c^2}$$

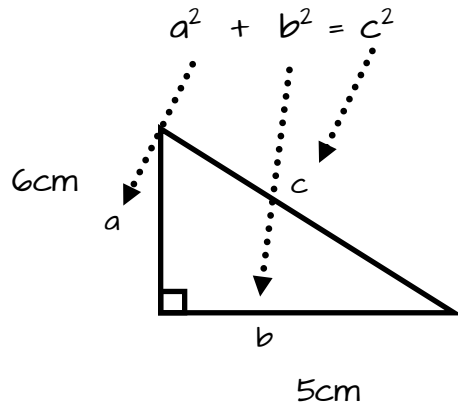
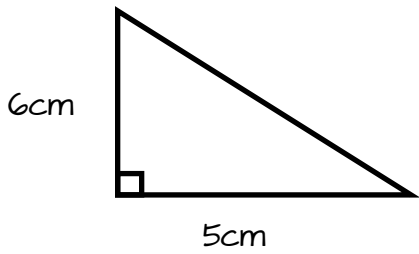
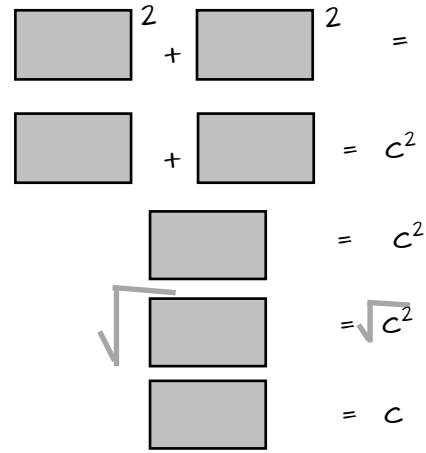
Solution

$$\square = c$$

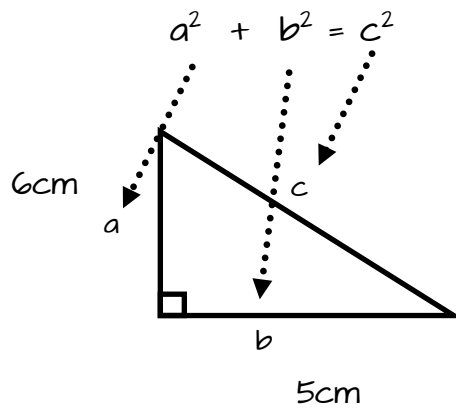
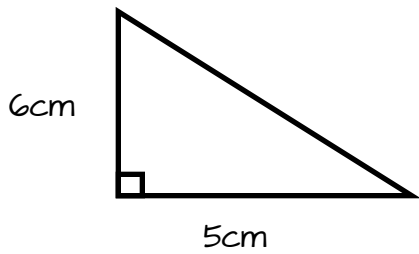
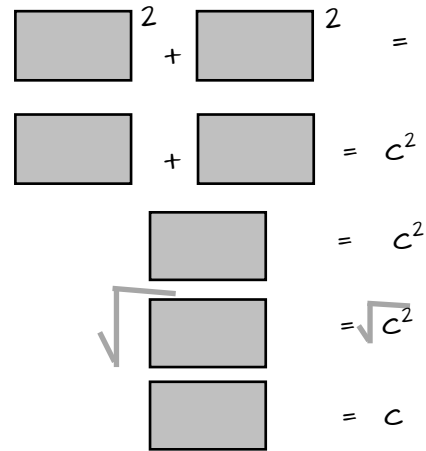




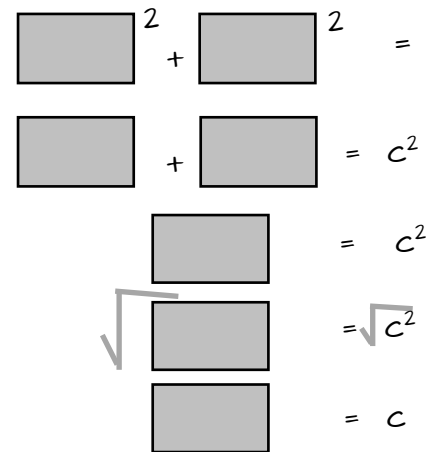
$$a^2 + b^2 = c^2$$

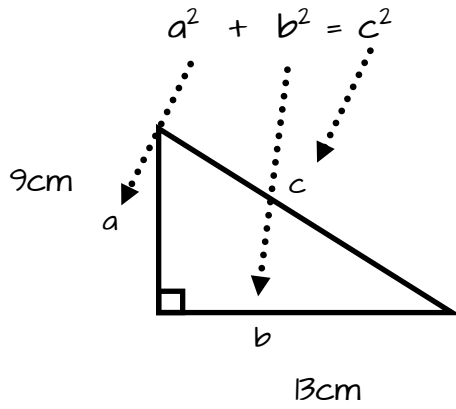
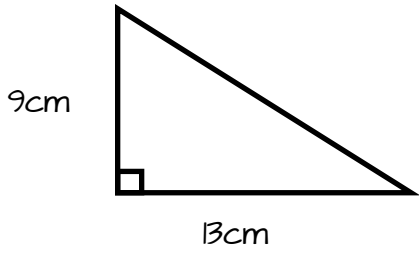


$$a^2 + b^2 = c^2$$

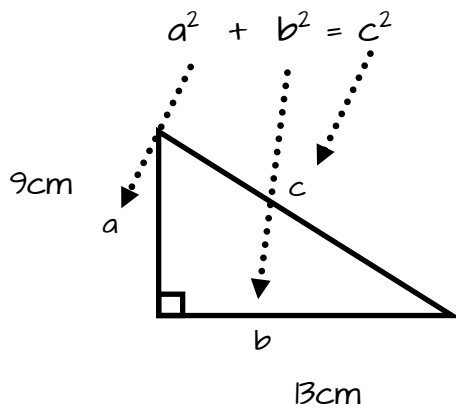
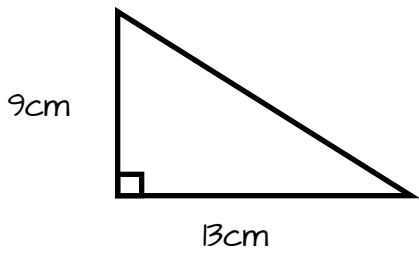
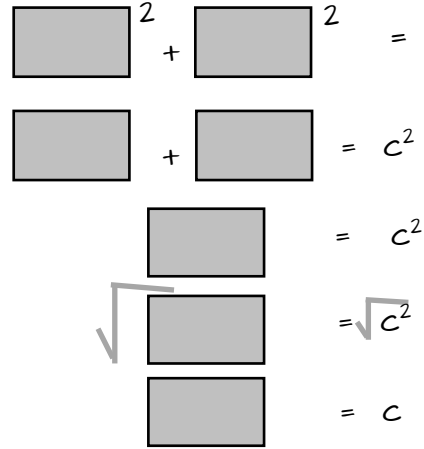


$$a^2 + b^2 = c^2$$

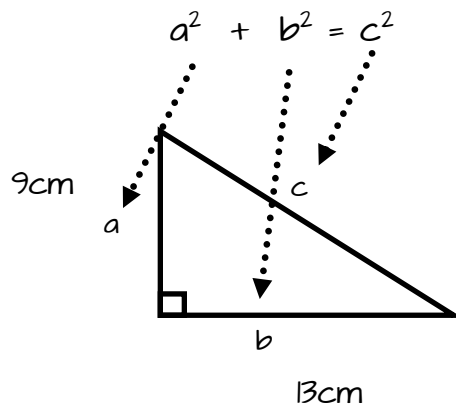
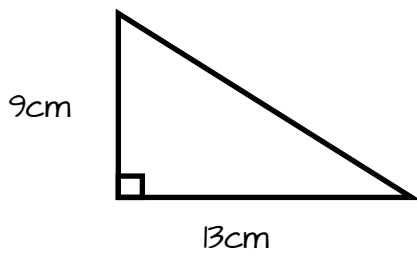
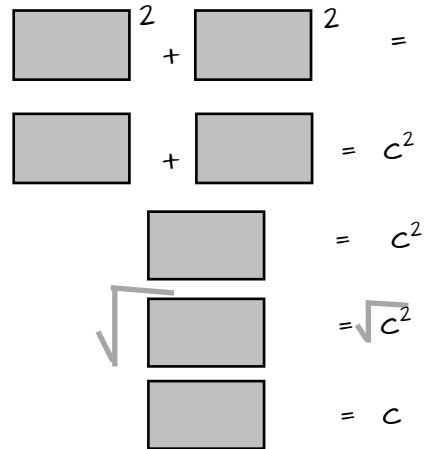




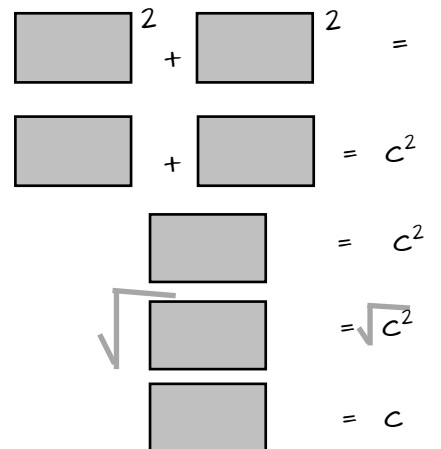
$$a^2 + b^2 = c^2$$

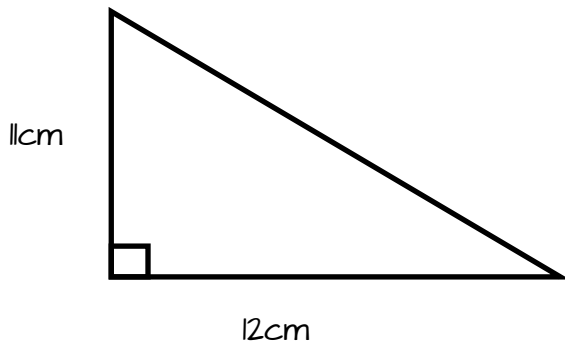


$$a^2 + b^2 = c^2$$



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





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

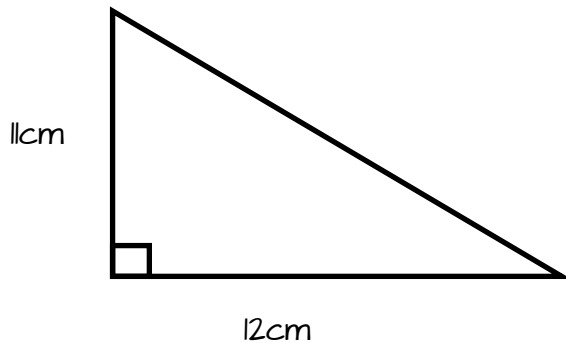
$$\square^2 + \square^2 =$$

$$\square + \square = c^2$$

$$\square = c^2$$

$$\sqrt{\square} = \sqrt{c^2}$$

$$\square = c$$



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

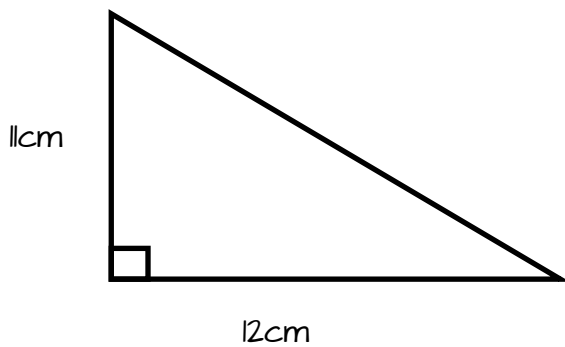
$$\square^2 + \square^2 =$$

$$\square + \square = c^2$$

$$\square = c^2$$

$$\sqrt{\square} = \sqrt{c^2}$$

$$\square = c$$



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

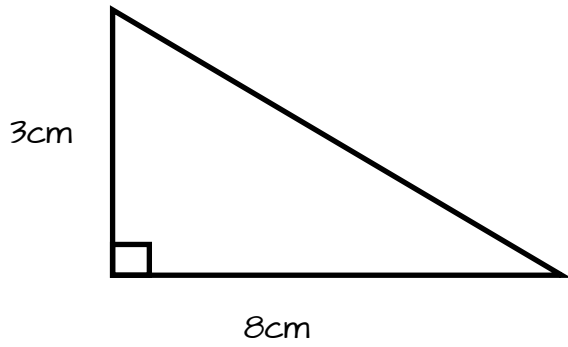
$$\square^2 + \square^2 =$$

$$\square + \square = c^2$$

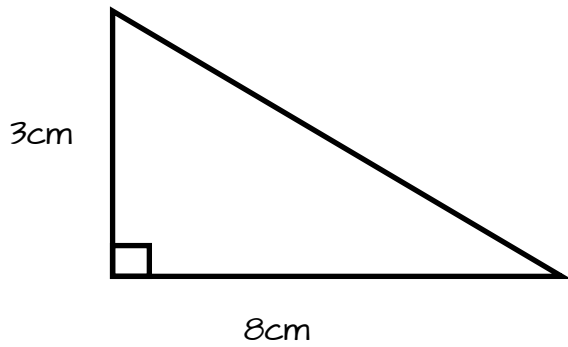
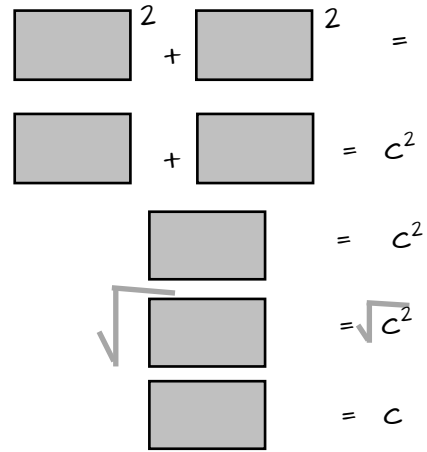
$$\square = c^2$$

$$\sqrt{\square} = \sqrt{c^2}$$

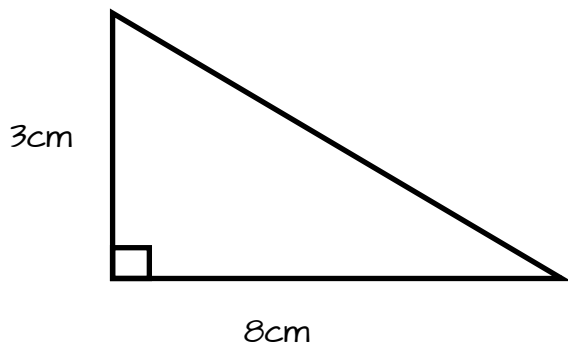
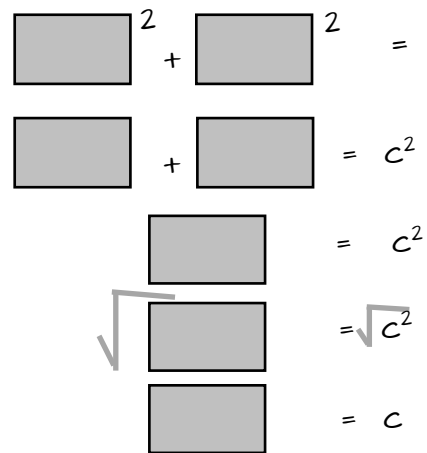
$$\square = c$$



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



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



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

