Name: _____ Key _____

Pythagorean Theorem Warm UP Review

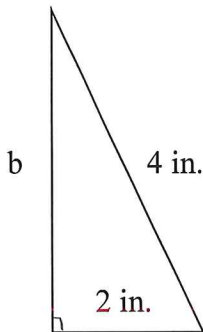a² + b² = c²

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

EXAMPLE 1: Find the length of **c**.

5 m

12 m

c
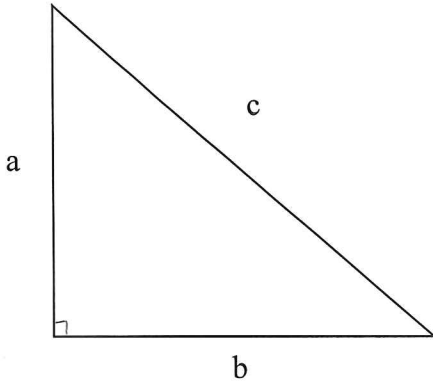
$$5^2 + 12^2 = c^2$$
$$25 + 144 = c^2$$
$$169 = c^2$$
$$\boxed{13m = c}$$

EXAMPLE 2: Find the length of **b**.

b

4 in.

2 in.

$$2^2 + b^2 = 4^2$$
$$4 + b^2 = 16$$
$$\sqrt{b^2} = \sqrt{12}$$

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$$\boxed{b = 2\sqrt{3} \text{ in}}$$

EXAMPLE 3: Find the length of **c**.

6 yd   6 yd

c

$$6^2 + 6^2 = c^2$$
$$36 + 36 = c^2$$
$$\sqrt{72} = c^2$$

$6 \leftarrow \sqrt{36} \; \textcircled{\sqrt{2}}$
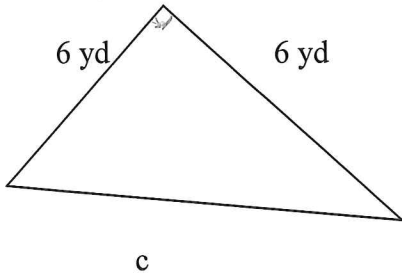
$$\boxed{c = 6\sqrt{2} \text{ yd}}$$

EXAMPLE 4: Find the length of **c**.

12   c

4
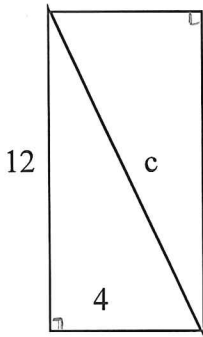
$$12^2 + 4^2 = c^2$$
$$144 + 16 = c^2$$
$$\sqrt{160} = c$$

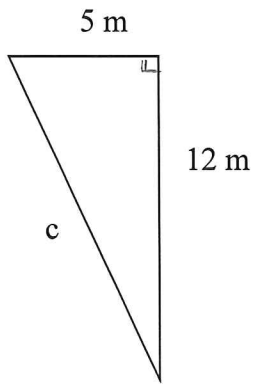$\sqrt{16} \; \textcircled{\sqrt{10}}$

4

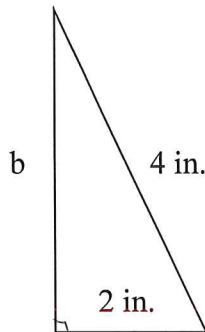$$\boxed{c = 4\sqrt{10}}$$

Pythagorean Theorem Warm UP Review
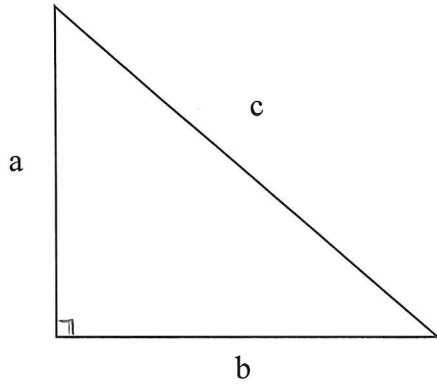
$$a^2 + b^2 = c^2$$

EXAMPLE 1: Find the length of **c**.

EXAMPLE 2: Find the length of **b**.

EXAMPLE 3: Find the length of c.

6 yd   6 yd

c

EXAMPLE 4: Find the length of c.

12   c

4