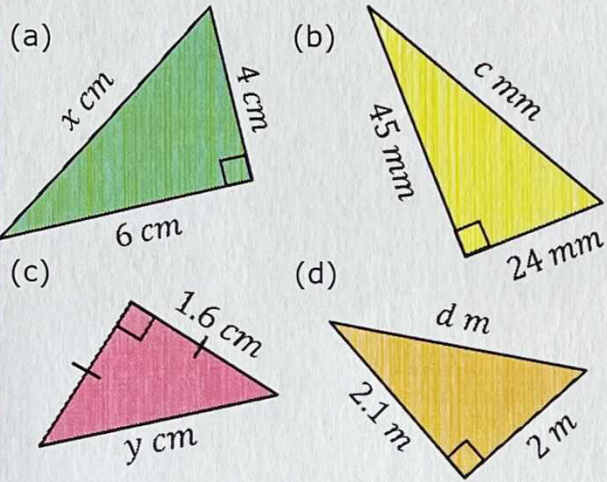


## Finding the Length of the Hypotenuse

Find each of these lengths, rounding to 1 decimal place when necessary.



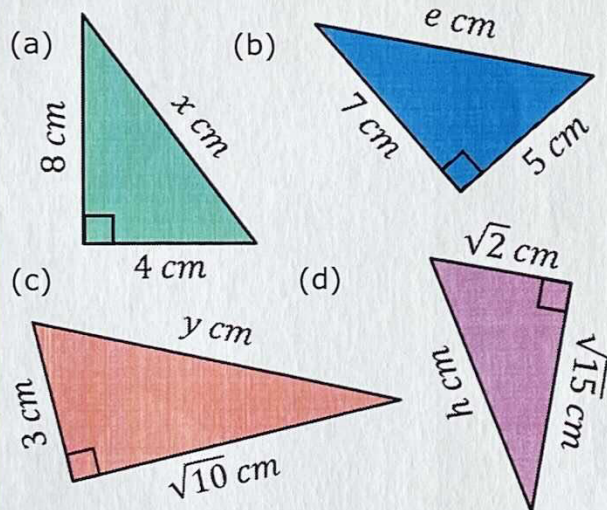
$$(a) \sqrt{4^2 + 6^2} = 7.2 \text{ cm}$$

$$(b) \sqrt{45^2 + 24^2} = 51 \text{ mm}$$

$$(c) \sqrt{1.6^2 + 1.6^2} = 2.3 \text{ cm}$$

$$(d) \sqrt{2.1^2 + 2^2} = 2.9 \text{ m}$$

Find each of these lengths, leaving your answers in surd form.



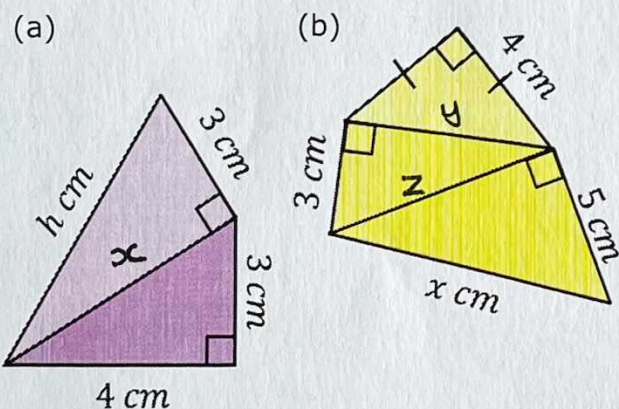
$$(a) \sqrt{4^2 + 8^2} = 4\sqrt{5} \text{ cm}$$

$$(b) \sqrt{5^2 + 7^2} = \sqrt{74} \text{ cm}$$

$$(c) \sqrt{3^2 + (\sqrt{10})^2} = \sqrt{19} \text{ cm}$$

$$(d) \sqrt{(\sqrt{2})^2 + (15)^2} = \sqrt{17} \text{ cm}$$

Find the given lengths, rounding your answers to 3 significant figures.



$$(a) x = \sqrt{3^2 + 4^2} = 5 \text{ cm}$$

$$h = \sqrt{3^2 + 5^2} = 5.83 \text{ cm}$$

$$(b) y = \sqrt{4^2 + 4^2} = 4\sqrt{2}$$

$$z = \sqrt{3^2 + (4\sqrt{2})^2} = \sqrt{41}$$

$$x = \sqrt{(\sqrt{41})^2 + 5^2} = 8.12 \text{ cm}$$