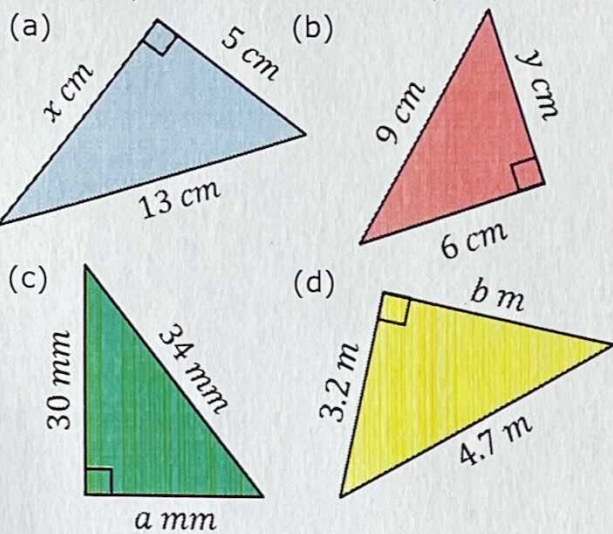


Finding the Length of a Short Side

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



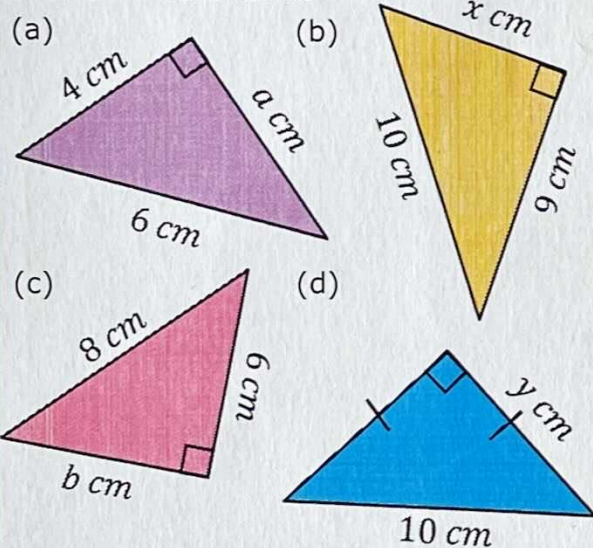
$$(a) \sqrt{13^2 - 5^2} = 12 \text{ cm}$$

$$(b) \sqrt{9^2 - 6^2} = 6.7 \text{ cm}$$

$$(c) \sqrt{34^2 - 30^2} = 16 \text{ mm}$$

$$(d) \sqrt{4.7^2 - 3.2^2} = 3.4 \text{ m}$$

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



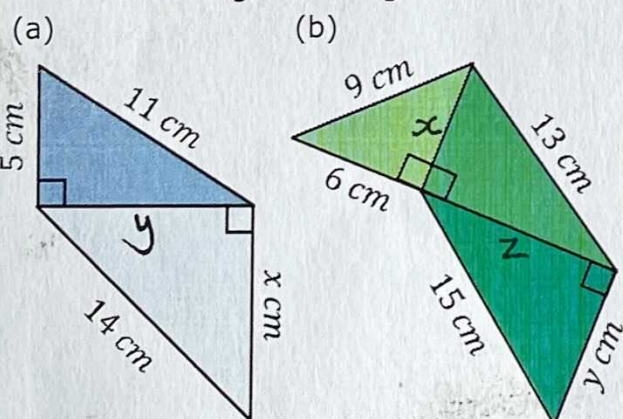
$$(a) \sqrt{6^2 - 4^2} = 2\sqrt{5} \text{ cm}$$

$$(b) \sqrt{10^2 - 9^2} = \sqrt{19} \text{ cm}$$

$$(c) \sqrt{8^2 - 6^2} = 2\sqrt{7} \text{ cm}$$

$$(d) \sqrt{\frac{10^2}{2}} = 5\sqrt{2} \text{ cm.}$$

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



$$(a) y = \sqrt{14^2 - 5^2} = 12.8 \text{ cm}$$

$$x = \sqrt{14^2 - (12.8)^2} = 5.0 \text{ cm}$$

$$(b) x = \sqrt{9^2 - 6^2} = 6.7 \text{ cm}$$

$$z = \sqrt{13^2 - (6.7)^2} = 10.0 \text{ cm}$$

$$y = \sqrt{15^2 - (10.0)^2} = 11.8 \text{ cm}$$