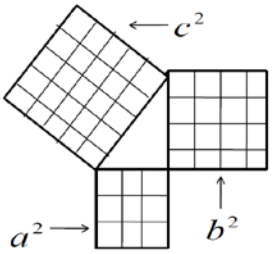
Pythagorean Theorem & Distance Formula

Pythagorean Theorem



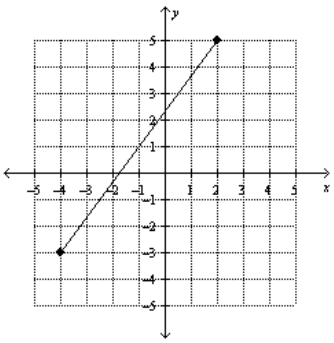
Theorem:

What it means?

Example

Darcy is making a card that is in the shape of a right triangle. The two shorter sides of the card are 8 cm and 15 cm. Find the perimeter of the card.

Finding Distance with $a^2 + b^2 = c^2$

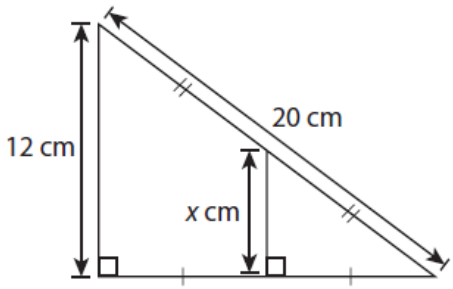


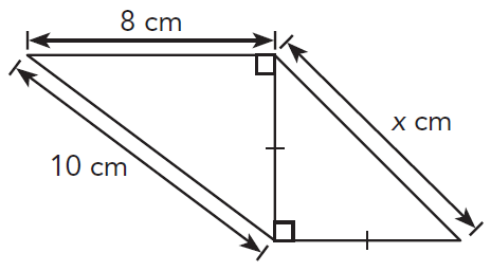
Distance Formula

$$\sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2}$$

Find the distance, to the nearest tenth, from R(7, -7) to W(-2, 1).

Find the value of x in the diagram.



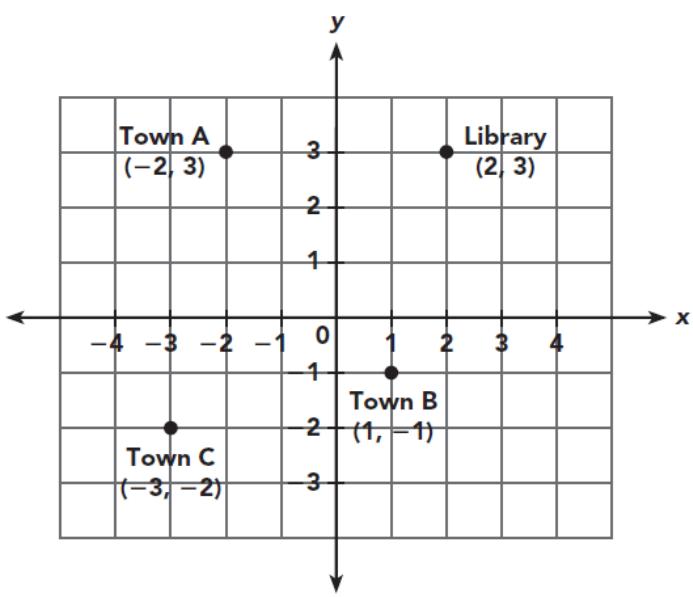


The diagram shows the locations of three towns and a library. Each unit on the grid represents 1 kilometer. *Round all answers to the nearest tenth.*

Find the actual distance between the library and

a) Town A

b) Town B



Amelia traveled from Town A to the library to return her books. She then traveled to Town B to meet her friend. She and her friend then traveled to Town C and had dinner. How far did Amelia travel?

$\sqrt{30}$	$\sqrt{26}$	$\sqrt{34}$	5.1	8.9	5.8
$\sqrt{15}$	$\sqrt{20}$	$\sqrt{17}$	4.5	7.2	4.1
$\sqrt{80}$	$\sqrt{63}$	$\sqrt{12}$	7.9	3.5	5.5
$\sqrt{52}$	$\sqrt{56}$	$\sqrt{68}$	7.5	8.2	3.9

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