

# Pythagorean Theorem Exit Quiz

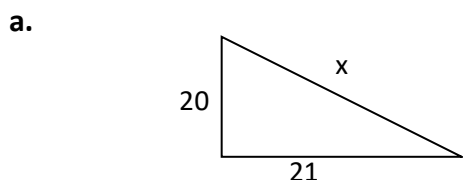
1. Find the length of the missing side in the following example. Show all work!

a.  $a = 9$      $b = ?$      $c = 13$

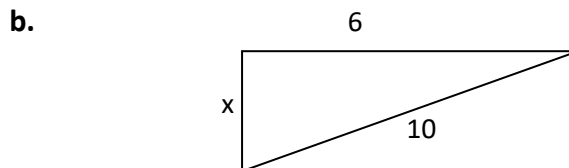
2. Which of the following sets of numbers will form a right triangle?

- a. 12, 13, 14                      c. 5, 6, 9  
b. 15, 16, 18                      d. 5, 12, 13

3. Use the Pythagorean Theorem to find x.

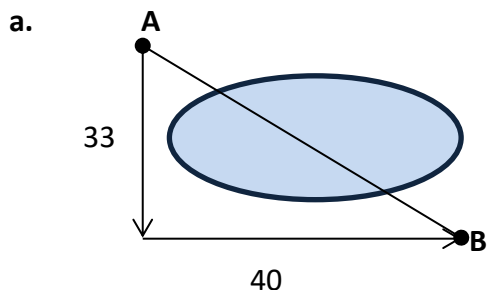


- 23
- 32
- 30
- 29



- 9
- 8
- 11
- 7

4. To get from point A to point B you must avoid walking through a pond. To avoid the pond, you must walk 33 meters south and 40 meters east. How many meters would be saved if it were possible to walk through the pond?



5. Find the distance between the points:

A (2, -2) and B (5, 2)

$(x_1, y_1)$      $(x_2, y_2)$      $d = ?$   
 $(2, -2)$      $(5, 2)$

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## ANSWERS

1. Find the length of the missing side in the following example. Show all work!

a.  $a = 9$        $b = ?$        $c = 13$

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

$$b^2 = 13^2 - 9^2$$

$$b^2 = 169 - 81$$

$$b^2 = 88$$

$$b = \sqrt{88}$$

2. Which of the following sets of numbers will form a right triangle?

a. 12, 13, 14

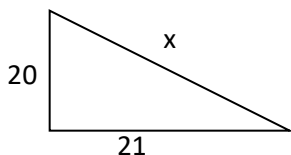
b. 15, 16, 18

c. 5, 6, 9

d. **5, 12, 13**

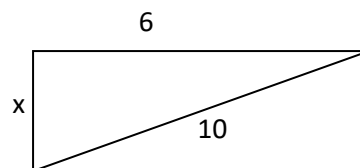
3. Use the Pythagorean Theorem to find x.

a.



- 23
- 32
- 30
- **29**

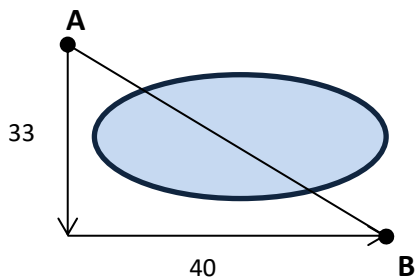
b.



- 9
- **8**
- 11
- 7

4. To get from point A to point B you must avoid walking through a pond. To avoid the pond, you must walk 33 meters south and 40 meters east. How many meters would be saved if it were possible to walk through the pond?

a.



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

$$c^2 = 33^2 + 40^2$$

$$c^2 = 1089 + 1600$$

$$c^2 = 2689$$

$$c = \sqrt{2689}$$

$$c = \mathbf{51.85 \text{ meters}}$$

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5. Find the distance between the points:

A (2, -2) and B (5, 2)

$$\begin{array}{cc} (x_1, y_1) & (x_2, y_2) \\ (2, -2) & (5, 2) \end{array} \quad d = ?$$

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

$$\sqrt{(5 - 2)^2 + (2 - (-2))^2}$$

$$d =$$

$$d = \sqrt{3^2 + 4^2}$$

$$d = \sqrt{25}$$

$$d = 5$$