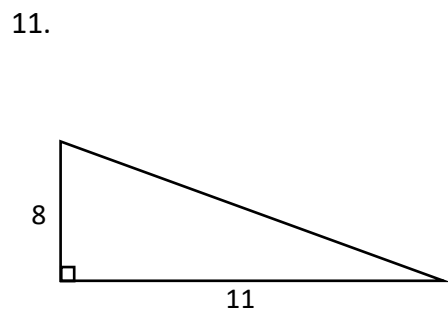
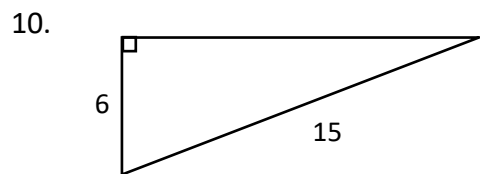
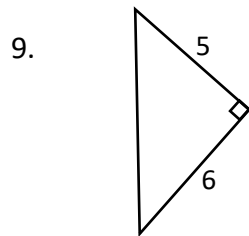
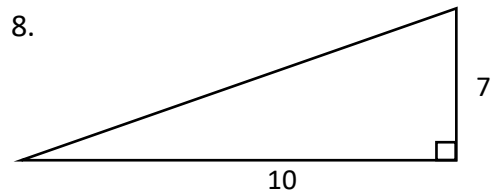
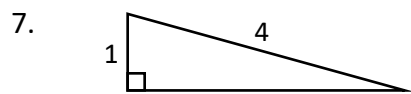


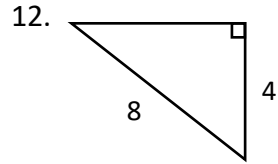
## Chapter Ch 5 - 3 Pythagorean Theorem Extended Practice

### True or False.

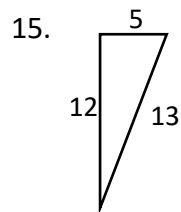
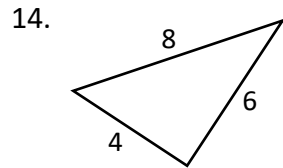
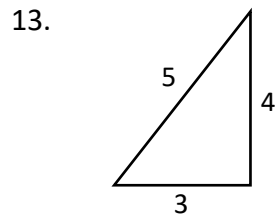
1. The Pythagorean Theorem is  $a^2 - b^2 = c^2$ .
2. In the Pythagorean Theorem,  $c$  represents the hypotenuse.
3. The Pythagorean Theorem can be used for any triangle.
4. In the Pythagorean Theorem,  $a$  and  $b$  represent the legs of the triangle.
5. The hypotenuse of a right triangle is always opposite the right angle.
6. A right angle is  $80^\circ$ .

### Find the missing side length to the nearest tenth.





Do the following lengths form a right triangle?



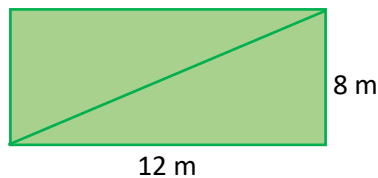
**16-20 Word Problems.**

16. Las Vegas, Los Angeles and Phoenix form a right triangle. If Los Angeles and Las Vegas are about 224 miles apart and Los Angeles and Phoenix are about 357 miles apart, how far apart are Las Vegas and Phoenix? Round to the nearest whole number.

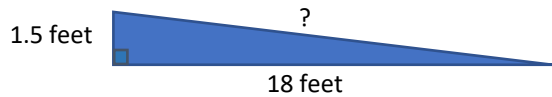


17. A ladder is placed 4 feet away from a house. The ladder is 10 feet long. How high up the house does the ladder reach? Round to the nearest tenth. (Hint: Draw a diagram first)

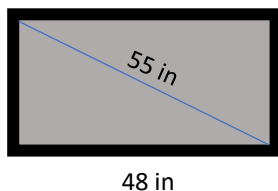
18. The school has a rectangular garden that they want to split diagonally from corner to corner using a fence. How much fencing do they need to split the garden diagonally as shown? Round to the nearest tenth.



19. According to ADA standards, the maximum slope for a wheelchair ramp is  $\frac{1}{12}$ . That means if a ramp rose 1.5 feet, it would cover a distance of 18 feet. In this situation, how long would the ramp need to be? Round to the nearest tenth.



20. The size of televisions is the diagonal measurement from corner to corner. If a 55-inch TV has a width of 48 inches, what is its height? Round to the nearest tenth.

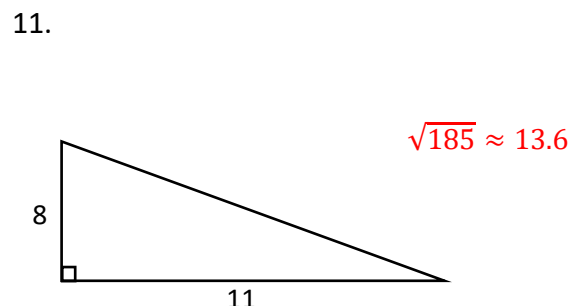
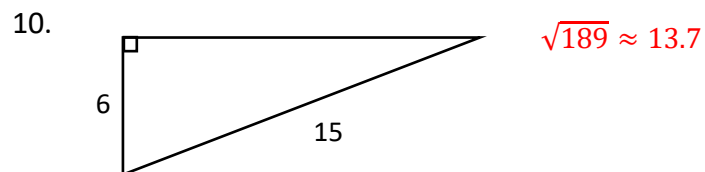
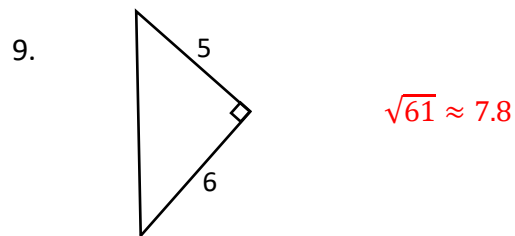
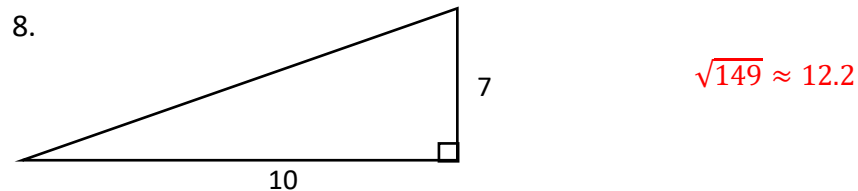
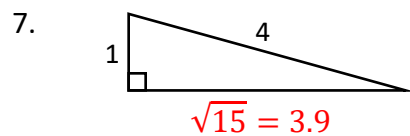


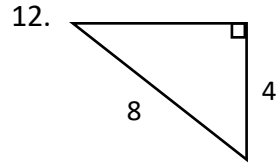
## Chapter Ch 5 - 3 Pythagorean Theorem Extended Practice Answer Key

True or False.

1. The Pythagorean Theorem is  $a^2 - b^2 = c^2$ . **FALSE**
2. In the Pythagorean Theorem,  $c$  represents the hypotenuse. **TRUE**
3. The Pythagorean Theorem can be used for any triangle. **FALSE**
4. In the Pythagorean Theorem,  $a$  and  $b$  represent the legs of the triangle. **TRUE**
5. The hypotenuse of a right triangle is always opposite the right angle. **TRUE**
6. A right angle is  $80^\circ$ . **FALSE**

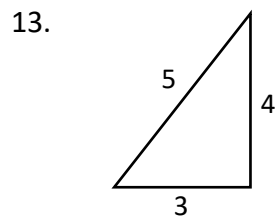
Find the missing side length to the nearest tenth.



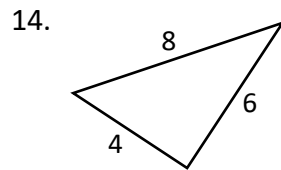


$$\sqrt{48} \approx 6.9$$

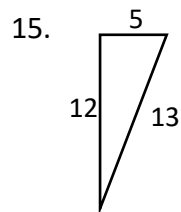
Do the following lengths form a right triangle?



$$\text{Yes. } 3^2 + 4^2 = 5^2$$



$$\text{No. } 4^2 + 6^2 = 52 \neq 8^2$$



$$\text{Yes. } 5^2 + 12^2 = 13^2$$

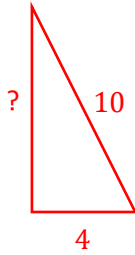
### 16-20 Word Problems.

16. Las Vegas, Los Angeles and Phoenix form a right triangle. If Los Angeles and Las Vegas are about 224 miles apart and Los Angeles and Phoenix are about 357 miles apart, how far apart are Las Vegas and Phoenix? **About 268 miles apart**



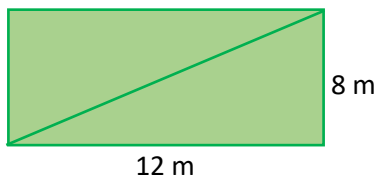
17. A ladder is placed 4 feet away from a house. The ladder is 10 feet long. How high up the house does the ladder reach? Round to the nearest tenth. (Hint: Draw a diagram first)

9.2 ft

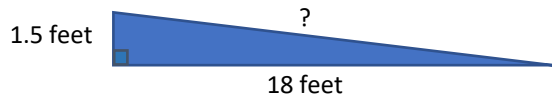


18. The school has a rectangular garden that they want to split diagonally from corner to corner using a fence. How much fencing do they need to split the garden diagonally as shown?

Round to the nearest tenth.  $\sqrt{270} \approx 16.4$



19. According to ADA standards, the maximum slope for a wheelchair ramp is 1/12. That means if a ramp rose 1.5 feet, it would cover a distance of 18 feet. In this situation, how long would the ramp need to be? Round to the nearest tenth. **18.1 feet**



20. The size of televisions is the diagonal measurement from corner to corner. If a 55-inch TV has a width of 48 inches, what is its height? Round to the nearest tenth. **26.9 inches**

