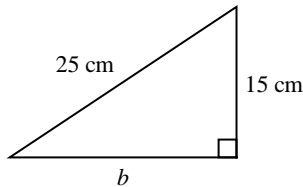


## Unit Practice Test -- Pythagorean Theorem

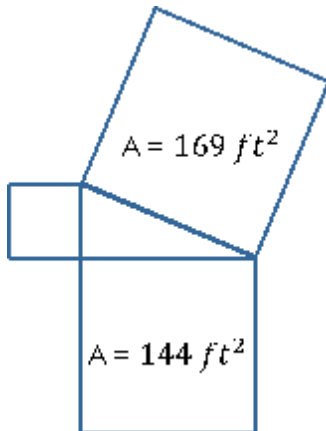
### Multiple Choice (85 points; 5.3 points each)

Identify the choice that best completes the statement or answers the question.

1. Find the length of the unknown side. Round your answer to the nearest tenth.

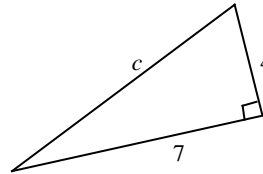


- A. 20 cm  
B. 400 cm  
C. 10 cm  
D. 29.2 cm
2. Find the *area* of the smallest side of the right triangle.

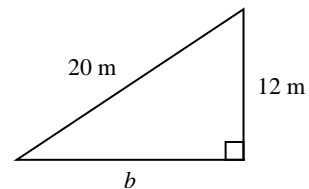


- A. 25 ft  
B. 5 ft  
C. 313 ft  
D. 13 ft
3. The length of two sides of a right triangle are leg: 12 m and hypotenuse: 15 m. Find the length of the third side.
- A. 1 m  
B. 6 m  
C. 9 m  
D. 17 m

4. Find the length of the hypotenuse. Round your answer to the nearest hundredth.

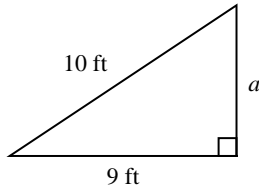


- A. 11.00  
B. 9.95  
C. 8.06  
D. 3.32
5. The length of two sides of a right triangle are leg: 9 m and hypotenuse: 16 m. Find the length of the third side. Round to the nearest tenth if necessary.
- A. 28.8 m  
B. 13.2 m  
C. 104 m  
D. 14.4 m
6. Find the following:  $\sqrt[3]{27}$
- A.  $21\frac{1}{3}$   
B. 4  
C. 3  
D. 9
7. Find the length of the unknown side. Round your answer to the nearest tenth.

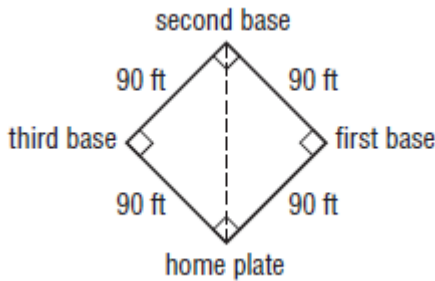


- A. 23.3 m  
B. 16 m  
C. 256 m  
D. 8 m

8. Find the length of the unknown side. Round your answer to the nearest tenth.

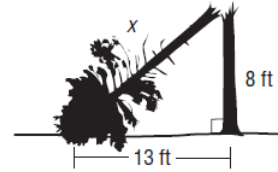


- A. 13.5 ft  
 B. 1 ft  
 C. 4.4 ft  
 D. 19 ft
9. Matt is the catcher for his school's baseball team. The catcher must be able to throw from home plate to second base. What is the distance from home plate to second base?



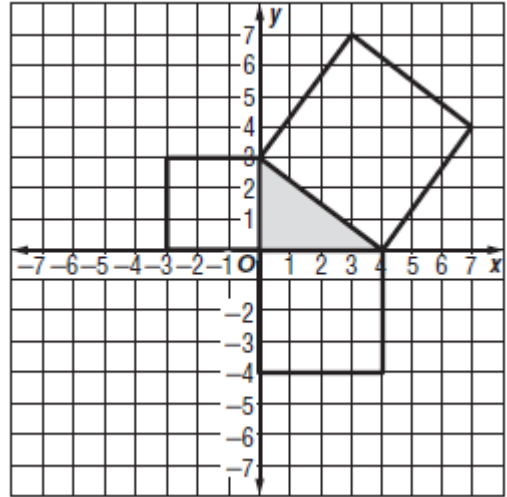
- A. 90 ft  
 B.  $90\sqrt{2}$  ft  
 C. 180  
 D.  $180\sqrt{2}$  ft
10. A rectangular park has been constructed in downtown Lilburn. The designer wants to put a gravel walkway that cuts diagonally through the park. The width is 8 ft and the height is 6 ft long. What is the length of his walkway?
- A. 23 feet  
 B. 13 feet  
 C. 10 feet  
 D. 7 feet

11. A large pine tree was struck by lightning and fell as shown by the diagram below. Which equation could be used to find the length of the fallen part of the tree?



- A.  $8^2 + 13^2 = x$   
 B.  $\sqrt{8^2 + 13^2} = x$   
 C.  $13^2 - 8^2 = x$   
 D.  $\sqrt{13^2 - 8^2} = x$
12. Find the distance between the two points: (-5,-3), (1,2). Round your answer to the nearest tenth.
- A. 7.8  
 B. 10.1  
 C. 61.0  
 D. 3.3
13. A grid shows the position of a subway stop and your house. The subway stop is located at (-10,-1) and your house is located at (-18,-16). What is the distance between your house and the subway stop?
- A. 15  
 B. 27  
 C. 19  
 D. 17
14. A standard Rubik's Cube has a volume of 216 cubic inches. What is the length of any edge of this cube?
- A. 9 inches  
 B. 3 inches  
 C. 6 inches  
 D. 81 inches
15. The bottom of a ladder must be placed 4 feet from a wall. The ladder is 12 feet long. How far above the ground does the ladder touch the wall? Round your number to the nearest tenth.
- A. 10.6 feet  
 B. 11.9 feet  
 C. 11.3 feet  
 D. 128

16. What is the area of the medium square in the figure shown?



- A. 5 square units
- B. 9 square units
- C. 16 square units
- D. 25 square units

**Short Answer (15 points)**

17. Decide whether the three points are the vertices of a right triangle. **Explain** your reasoning.  
 A: (3, 1), B: (0, 0), C: (2, 4) **(10 points)**

18. There is a Chick-fil-a exactly 7 miles due west of Berkmar Middle School. There is also a Wal-Mart 5 miles due north of Berkmar Middle School. How far is the Chick-fil-a from the Wal-Mart? Leave your answer in its simplest radical form. **(5 points)**

**Unit Test -- Pythagorean Theorem  
Answer Section**

**MULTIPLE CHOICE**

1. A
2. A
3. C
4. C
5. B
6. C
7. B
8. C
9. B
10. C
11. B
12. A
13. D
14. C
15. C
16. C

**SHORT ANSWER**

17. Yes  
AB =  $\sqrt{10}$   
BC =  $\sqrt{20}$   
AC =  $\sqrt{10}$   
 $10 + 10 = 20$
18.  $\sqrt{74}$