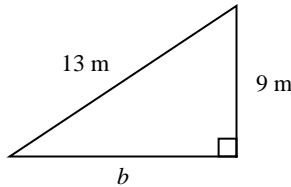


## Practice Test -- Pythagorean Theorem

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

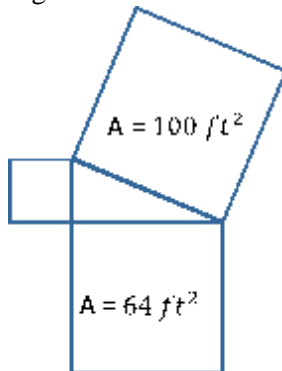
Identify the choice that best completes the statement or answers the question.

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



- A. 9.4 m  
B. 88 m  
C. 15.8 m  
D. 4 m

2. Find the area AND side length of the shortest side of the right triangle below.

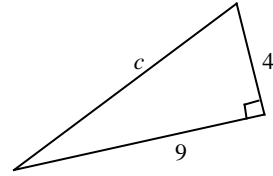


- A. Area:  $36\text{ft}^2$ ; side: 6 feet  
B. Area:  $6\text{ft}^2$ ; side: 36 feet  
C. Area:  $164\text{ft}^2$ ; side: 13 feet  
D. Area:  $13\text{ft}^2$ ; side: 164 feet

3. The length of two sides of a right triangle are leg: 9 m and hypotenuse: 15 m. Find the length of the third side.

- A. 15 m  
B. 20 m  
C. 12 m  
D. 40 m

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



- A. 9.85  
B. 10.82  
C. 17.26  
D. 13.00

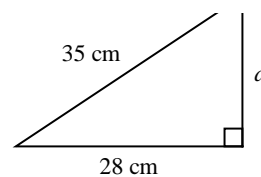
5. The length of two sides of a right triangle are leg: 7 m and hypotenuse: 11 m. Find the length of the third side. Round to the nearest tenth if necessary.

- A. 18.0 m  
B. 8.5 m  
C. 4 m  
D. 13.0 m

6. Find the following:  $\sqrt[3]{-216}$

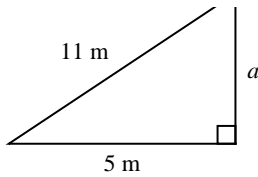
- A.  $21\frac{1}{3}$   
B. 5  
C. -72  
D. -6

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



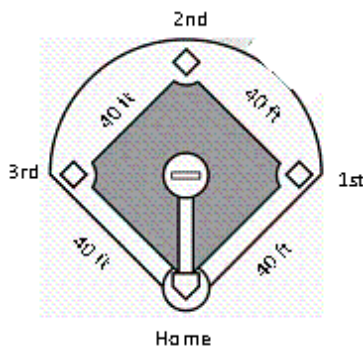
- A. 441 cm  
B. 7 cm  
C. 8 ft  
D. 21 cm

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



- A. 9.8 m
- B. 12.1 m
- C. 6 m
- D. 96 m

9. In a little league field, each base is 40 feet from the next. How far must a catcher throw if he wants to throw from home to second? Assume that a runner makes a right angle when he runs from home to first to second.

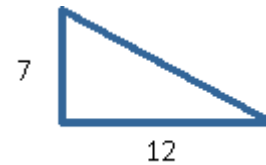


- A. 80 ft
- B.  $80\sqrt{2}$  ft
- C. 40 ft
- D.  $40\sqrt{2}$  ft

10. A rectangular park has been constructed in downtown Lilburn. The designer wants to put a gravel walkway that cuts *diagonally* through the park. If the width of the park is 18 feet and the height of the park is 24 feet, what is the length of his walkway?

- A. 15 feet
- B. 30 feet
- C. 8 feet
- D. 7 feet

11. Which of the following equations could be used to find the length of the hypotenuse of the following right triangle?



- A.  $7^2 + 12^2 = c$
- B.  $\sqrt{7^2 + 12^2} = c$
- C.  $12^2 - 7^2 = c$
- D.  $\sqrt{12^2 - 7^2} = c$

12. Find the distance between the two points: (-3,-4), (1,6). Round your answer to the nearest tenth.
- A. 12.8
  - B. 10.6
  - C. 11.7
  - D. 26

13. A grid shows the position of a subway stop and your house. The subway stop is located at (-7,-25) and your house is located at (0,-1). What is the distance between your house and the subway stop?

- A. 15
- B. 25
- C. 17
- D. 19

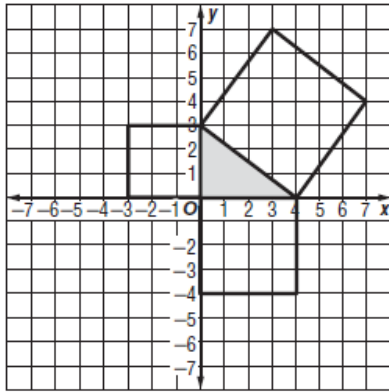
14. A cube has a volume of 512 cubic feet. What is the length of one edge of the cube?

- A. 6 feet
- B. 7 feet
- C. 8 feet
- D. 9 feet

15. The bottom of a ladder must be placed 3 feet from a wall. The ladder is 10 feet long. How far above the ground does the ladder touch the wall? Round your number to the nearest tenth.

- A. 9.5 feet
- B. 11.8 feet
- C. 12.8 feet
- D. 14.8 feet

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



- A. 3 square units
- B. 9 square units
- C. 25 square units
- D. 5 square units

**Short Answer (15 points)**

17. Decide whether the three points are the vertices of a right triangle. **Explain** your reasoning.

A: (-4, -1), B: (2, 5), C: (1, -6) **(10 points)**

18. There is a Chick-fil-a exactly 6 miles due east of Berkmar Middle School. There is also a Wal-Mart 6 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)**

**Practice Test -- Pythagorean Theorem  
Answer Section**

**MULTIPLE CHOICE**

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

**SHORT ANSWER**

17. Yes  
AB =  $\sqrt{72}$   
BC =  $\sqrt{122}$   
AC =  $\sqrt{50}$   
 $72 + 50 = 122$
18.  $6\sqrt{2}$