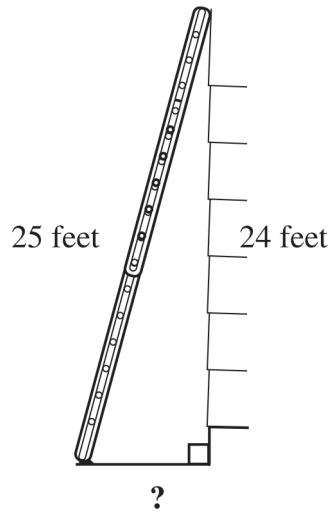


Pythag Review

Name: _____

Date: _____

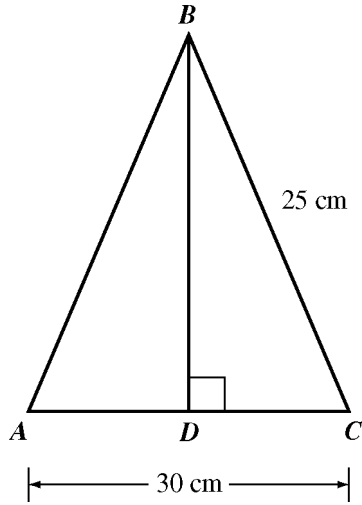
1. The diagram below shows the placement of a ladder against Cheri's house.



The ladder needs to lean against the house at a height of 24 feet. How far should Cheri place the base of the ladder from her house?

- A. 1 foot B. 7 feet C. 35 feet D. 49 feet

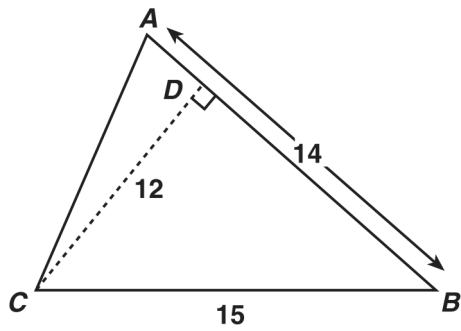
2. In the figure below, D is the midpoint of \overline{AC} , and \overline{BD} is perpendicular to \overline{AC} .



What is the length of \overline{BD} ?

- A. 15 centimeters B. 16 centimeters C. 18 centimeters D. 20 centimeters

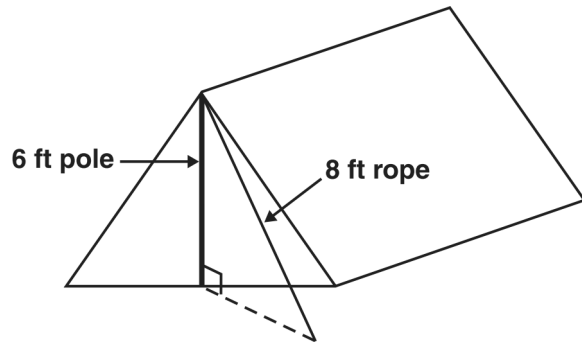
3. In the figure below, \overline{AB} and \overline{CD} are perpendicular.



What is the perimeter of $\triangle ABC$?

- A. 13 B. 28 C. 42 D. 84

4. Sophia used an 8-foot rope to secure a 6-foot tent pole as shown.

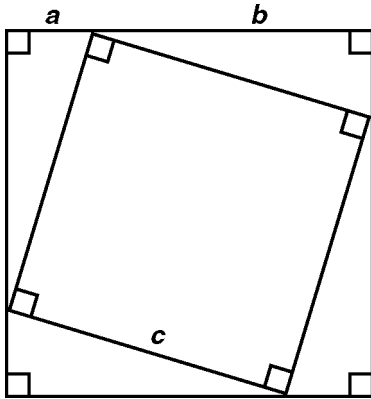


Approximately how far from the base of the pole is the rope tied?

- A. 5 feet B. 7 feet C. 10 feet D. 14 feet
5. A rectangle has a diagonal that measures 10 centimeters and a length that is 2 centimeters longer than the width. What is the width of the rectangle in centimeters?

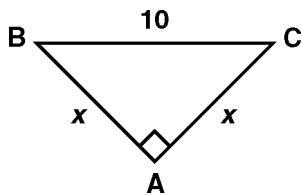
- A. 5 B. 6 C. 8 D. 12

6. A diagram from a proof of the Pythagorean theorem is pictured below.



Which statement would not be used in the proof of the Pythagorean theorem?

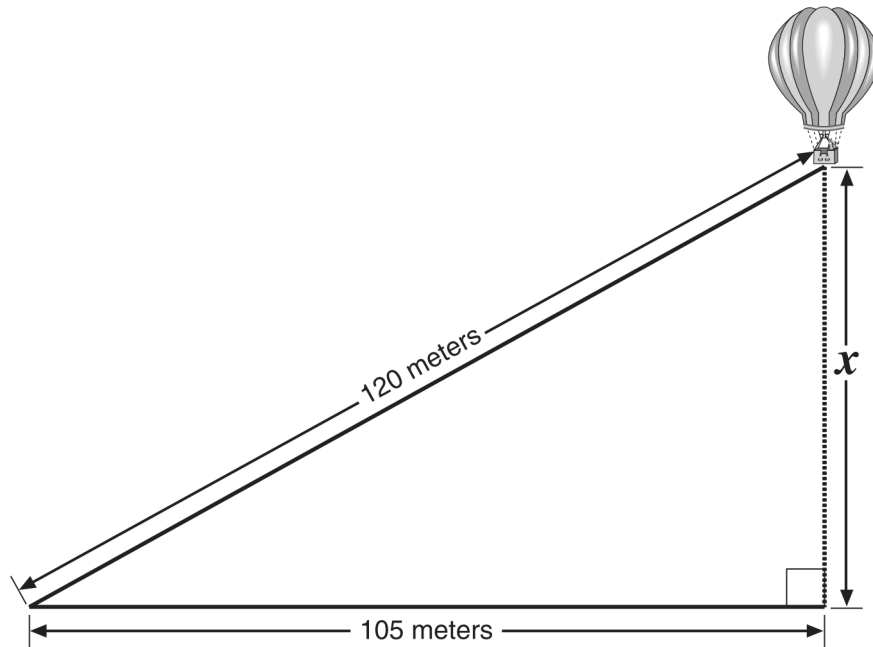
- A. The area of a triangle equals $\frac{1}{2} ab$.
 - B. The four right triangles are congruent.
 - C. The area of the inner square is equal to half of the area of the larger square.
 - D. The area of the larger square is equal to the sum of the areas of the smaller square and the four congruent triangles.
7. What is the value of x in the triangle below?



- A. 5
- B. $5\sqrt{2}$
- C. $10\sqrt{3}$
- D. 20

8. **Hot Air Balloon**

The diagram shows a hot-air balloon tied to the ground by a rope.

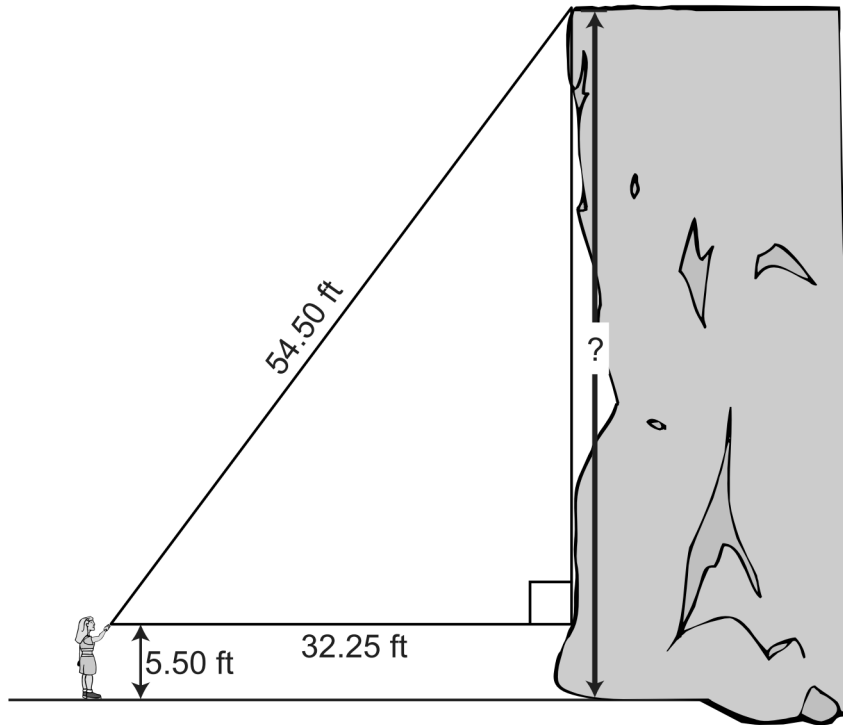


To the nearest meter, what is x , the distance from the balloon to the ground?

9. José wants to buy a new TV that will fit the opening of his entertainment center. The height of the opening in his entertainment center is 27 inches. Usually, the opening of an entertainment center has a width-to-height ratio of 4:3.

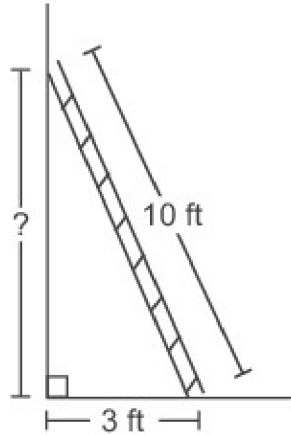
What is the diagonal measurement of the opening in José's entertainment center?

10. A rock climber uses an electronic distance measurement tool to determine the height of a cliff before she climbs it.



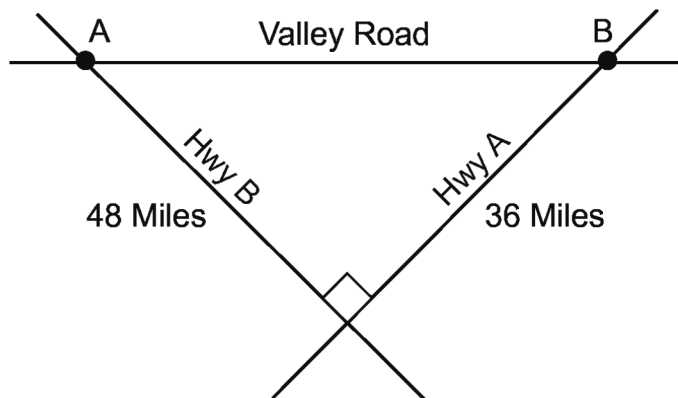
Holding the device 5.50 feet above the ground, the rock climber measures her horizontal distance from the cliff to be 32.25 feet and the distance to the top of the cliff to be 54.50 feet. How high, in feet, is the cliff from the ground? Round your answer to the nearest hundredth of a foot.

11. Mike leans a 10-foot ladder against a wall. He puts the bottom of the ladder 3 feet away from the wall, as shown.



Approximately how far up the wall does the ladder go?

- A. 7.0 feet B. 9.5 feet C. 10.4 feet D. 13.0 feet
12. To go from Point A to Point B, Malia could travel along 2 main highways or take the direct route along Valley Road.

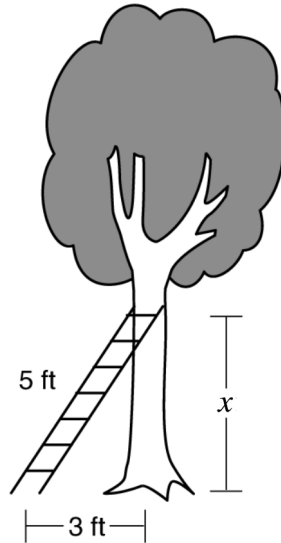


How many miles long is the route along Valley Road?

- A. 12 miles B. 24 miles C. 36 miles D. 60 miles

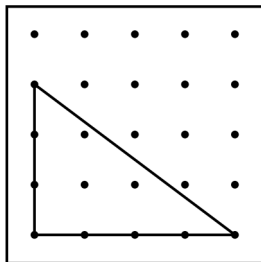
13. A rectangular piece of paper measures 10 centimeters wide by 17 centimeters long. What is the length of the paper's diagonal to the nearest centimeter?
- A. 14 centimeters B. 17 centimeters C. 20 centimeters D. 27 centimeters

14. Helen's cat, Kitty, is stuck in the tree. In order to rescue Kitty, Helen must lean a five foot ladder against the tree, as shown in the diagram below. The distance between the bottom of the tree and the ladder is three feet.



How high above the ground is the top of the ladder, represented by the variable x ?

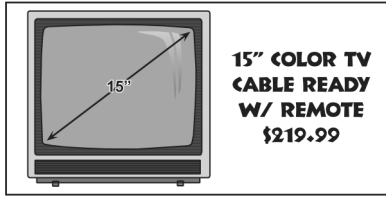
- A. 3 feet B. 4 feet C. 5 feet D. 6 feet
15. On the grid below, the distance between each dot is 1 inch.



What is the length, in inches, of the hypotenuse of the right triangle?

- A. 4 B. 4.5 C. 5 D. 5.5

16. Use the graphic to answer the question.



The size of a television screen is measured by the diagonal distance across the screen.

- a) A 15" diagonal screen has a horizontal width of 12". What is the vertical height of the screen? Show or explain how you found your answer.
- b) A 50" diagonal screen is to have its dimensions proportional to those of the screen in part a. What are its width and height? Show or explain how you found your answers.
- c) Suppose that the ratio of a television's width to its height was 3 to 2. What would be the dimensions of a 17" diagonal screen? Show or explain how you found your answer.

1.
Answer: B

2.
Answer: D

3.
Answer: C

4.
Answer: A

5.
Answer: B

6.
Answer: C

7.
Answer: B

8.
Answer:

			5	8	.		
0	0	0	0	0		0	0
1	1	1	1	1		1	1
2	2	2	2	2		2	2
3	3	3	3	3		3	3
4	4	4	4	4		4	4
5	5	5	●	5		5	5
6	6	6	6	6		6	6
7	7	7	7	7		7	7
8	8	8	8	●		8	8
9	9	9	9	9		9	9

9.
Answer:

10.
Answer: 49.43

11.
Answer: B

12.
Answer: D

13.
Answer: C

14.
Answer: B

15.
Answer: C

16.
Answer: