

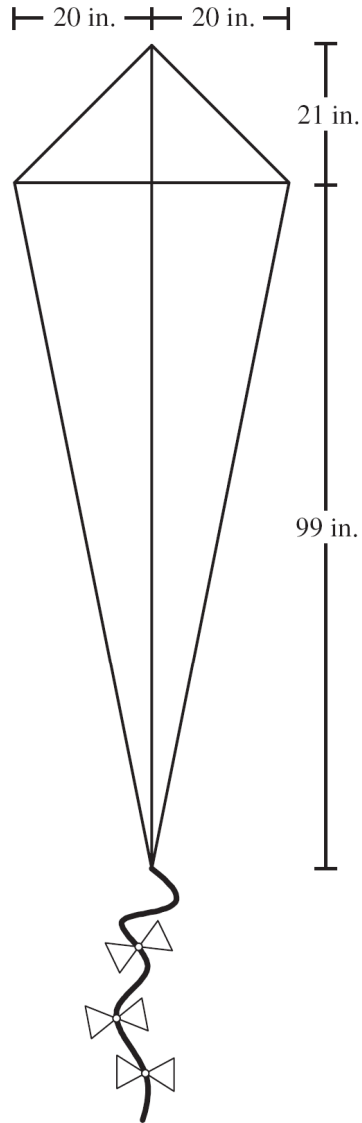
Pythagorean Theorem and Special Triangles MCAS Worksheet 1

Name _____

1

A kite has perpendicular diagonals with the measures shown in the drawing below.

Mark your answer here: 1. (A)(B)(C)(D)



What is the perimeter, in inches, of the kite?

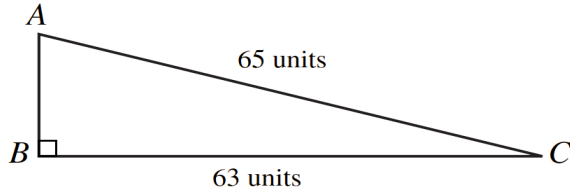
- A. 130
- B. 165
- C. 260
- D. 310



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- 2 Triangle ABC , shown below, is a right triangle.

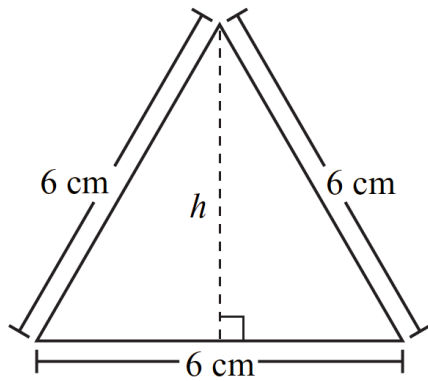


Mark your answer here: 2. (A)(B)(C)(D)

What is the length of \overline{AB} ?

- A. 2 units
- B. 16 units
- C. 64 units
- D. 90.5 units

- 3 An equilateral triangle and its side lengths are shown below.



Mark your answer here: 3. (A)(B)(C)(D)

What is h , the height of the equilateral triangle?

- A. 3 cm
- B. 4 cm
- C. $3\sqrt{3}$ cm
- D. $3\sqrt{5}$ cm



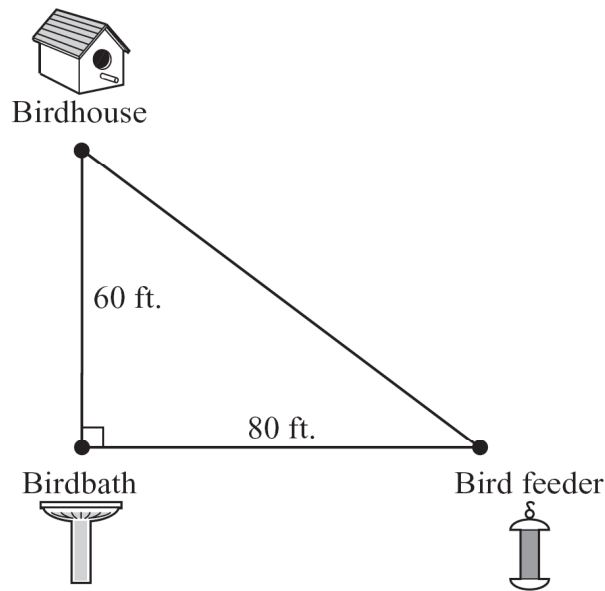
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- 4** The area of a square is 36 square feet. Which of the following measures is closest to the length of its diagonal?
- A. 8.1 ft.
 - B. 8.3 ft.
 - C. 8.5 ft.
 - D. 8.7 ft.

Mark your answer here: 4. (A)(B)(C)(D)

- 5** Brian set up a birdhouse, a birdbath, and a bird feeder in his backyard. The vertices of the triangle shown below represent the locations of these three objects in his backyard.



Based on the distances shown, what is the distance, in feet, between the birdhouse and the bird feeder?

Write your answer here:



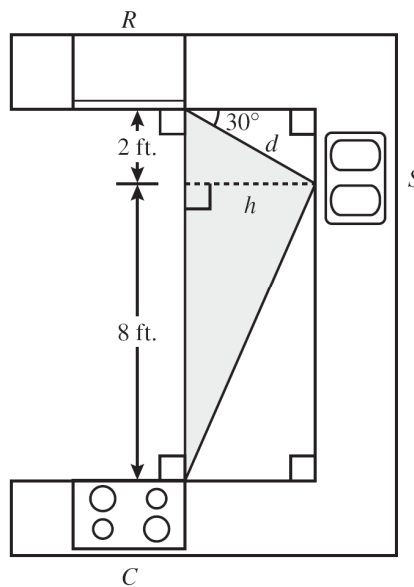
Directions: For the problem below, use a separate piece of paper to write your answers. Your teacher will not count anything you write on this page.

6

The diagram below shows a kitchen floor plan. When architects design a kitchen, they often consider the distances between the following three major work locations shown in the diagram:

- the refrigerator, indicated by R
- the sink, indicated by S
- the cooking area, indicated by C

When these three locations are connected, a triangle known as the “Work Triangle” is formed. This is the area that has the highest amount of traffic in a kitchen. The shaded area in the diagram is the Work Triangle.



- a. What is d , the distance, in feet, along the side of the Work Triangle from the sink to the refrigerator? Show or explain how you got your answer.
- b. What is h , the height, in feet, of the Work Triangle? Show or explain how you got your answer.
- c. What is the area, in square feet, of the Work Triangle? Show or explain how you got your answer.

