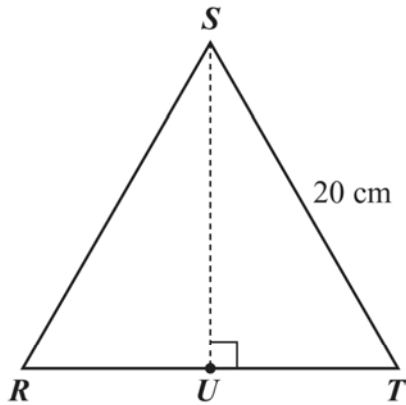


- 1 In the diagram below, $\triangle RST$ is equilateral, and U is the midpoint of \overline{RT} .

Mark your answer here: 1. A B C D



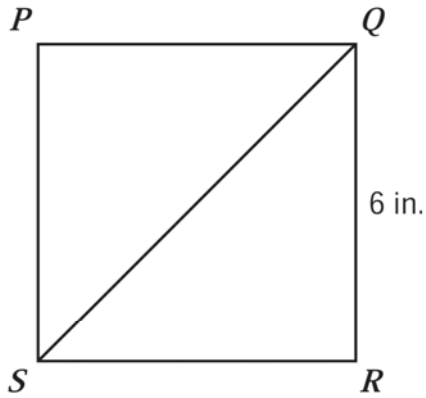
If the length of \overline{ST} is 20 centimeters, what is the length of \overline{SU} ?

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



- 2 Gail drew square $PQRS$ shown below.

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



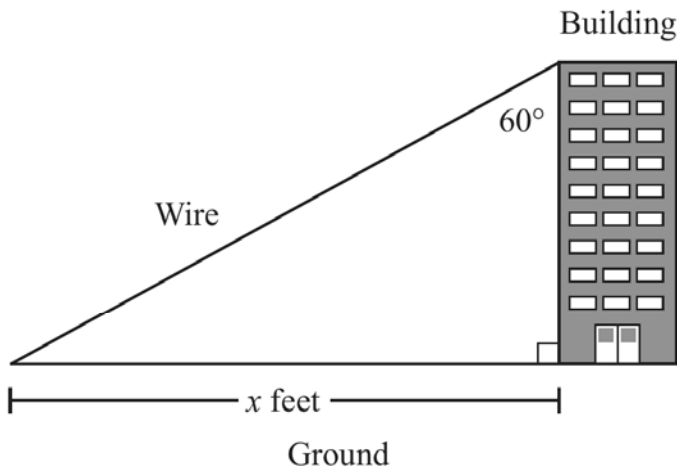
What is the length, in inches, of \overline{SQ} ?

- A. $6\sqrt{2}$
- B. 9
- C. $6\sqrt{3}$
- D. 12



- 3 For a movie scene, a stuntman will slide down a wire that is connected from the top of a building to the ground. The wire, the side of the building, and the ground can be represented as the sides of a right triangle, as shown in the figure below.

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



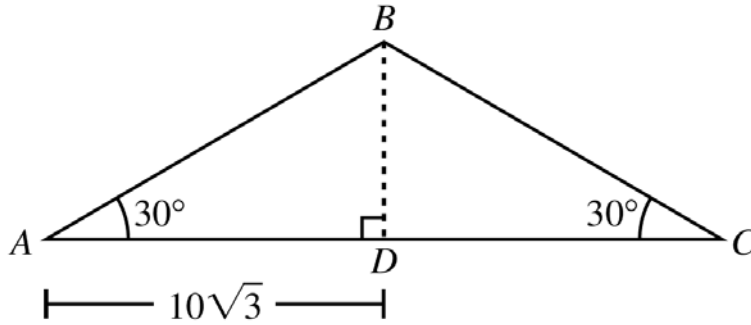
The height of the building where the wire is attached is 70 feet. Based on the angle measure in the figure, which of the following is closest to the value of x ?

- A. 40.4
- B. 70.0
- C. 121.2
- D. 140.0



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.

- 4 Isosceles triangle ABC , with height BD , is shown in the diagram below.



In the diagram, AD equals $10\sqrt{3}$ units.

- a. What is DC , in units? Show or explain how you got your answer.
- b. What is $m\angle ABD$, in degrees? Show or explain how you got your answer.
- c. What is BD , in units? Show or explain how you got your answer.
- d. What is AB , in units? Show or explain how you got your answer.

