

## Assignment 6-1

## Sec 1

## Pythagorean Theorem/Simplifying Radicals

## Unit 6

Simplify each expression.

1.  $\sqrt{169}$

7.  $\sqrt{6}$

13.  $\sqrt{27}$

2.  $\sqrt{36}$

8.  $\sqrt{756}$

14.  $\sqrt{16}$

3.  $\sqrt{25}$

9.  $\sqrt{600}$

15.  $\sqrt{243}$

4.  $\sqrt{30}$

10.  $\sqrt{35}$

16.  $\sqrt{54}$

5.  $\sqrt{75}$

11.  $\sqrt{64}$

17.  $\sqrt{24}$

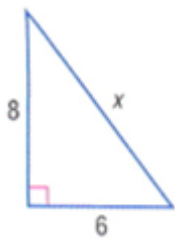
6.  $\sqrt{45}$

12.  $\sqrt{50}$

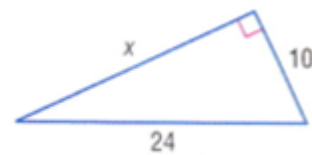
18.  $\sqrt{72}$

Find the length of the missing side. Show your work.

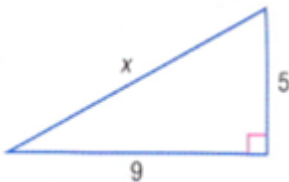
19.



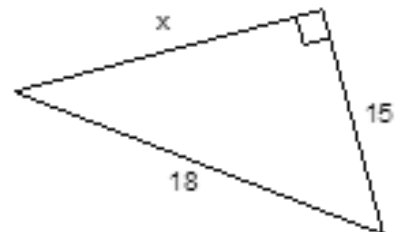
22.



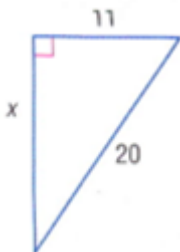
20.



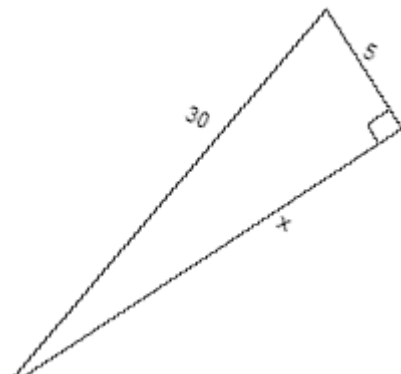
23.



21.



24.



Is it possible to form a right triangle with these three lengths? SHOW YOUR WORK!

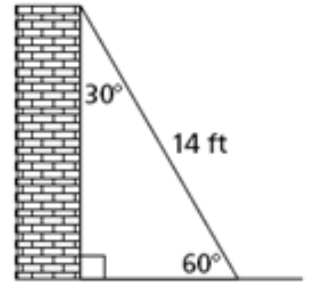
25. 65, 72, 97

27. 15, 27, 12

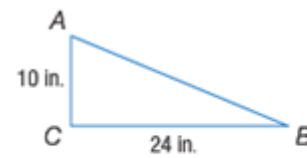
26. 28, 195, 197

28. 30, 122, 125

29. A 14 foot piece of wire is strung from the top of a building to a point on the ground that is 6.5 feet from the base of the building as shown in the diagram. How tall is the building?



30. What is the perimeter of the right triangle  $ABC$ ?



(A) 26 in.

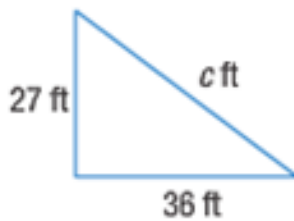
(C) 60 in.

(B) 34 in.

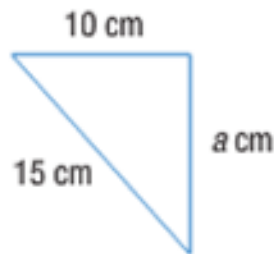
(D) 68 in.

Find the missing side of each right triangle.

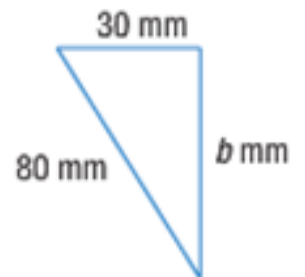
31.



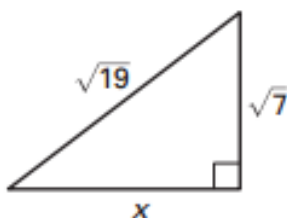
32.



33.



34.



35.



36.

