Name _____ Class _____

Pythagorean Theorem Study Guide

Solve for the unknown side in each right triangle. Round to the nearest tenth if necessary. Use Pythagorean Triples if you can.

1.

R

12 c

T 9 S

2.

A

10 c

C 7.5 B

3.

C b A

15 25

B

4.

B

38 30

A b C
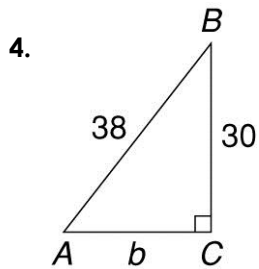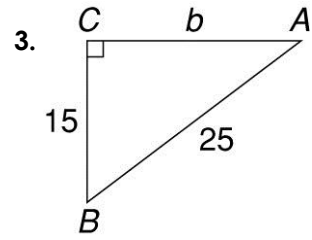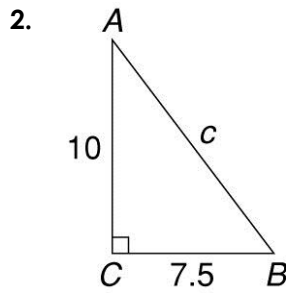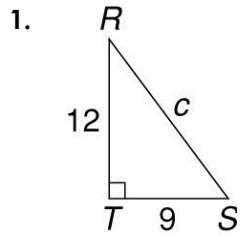
5.

B

c 45

A 24 C

6.

A

b 29

C 21 B

7.

A

78 b

B 30 C

8.

B

18 a

A 12 C

9.

A

120 c

C 22 B

10.

A 23 C

a

29

B
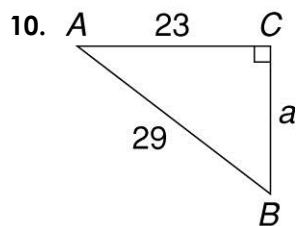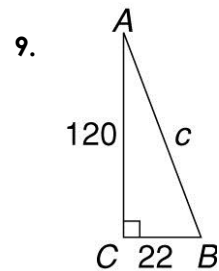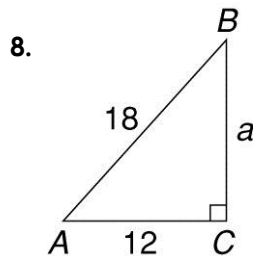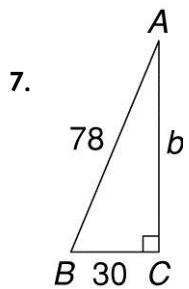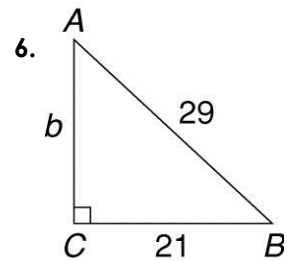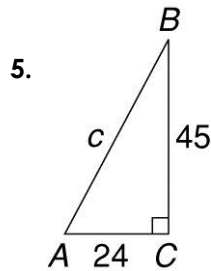
11. $a = 30, b = ?, c = 50$

12. $a = 0.5, b = ?, c = 1.3$

13. $a = 21$, $b = ?$, $c = 46$

14. $a = 40$, $b = ?$, $c = 65$

15. Use the Pythagorean Theorem to find the base of the triangle shown.

A

117

108

B   *C*

16.

3   5

17.

12

16

18.

12

9

19.

21   35

20.
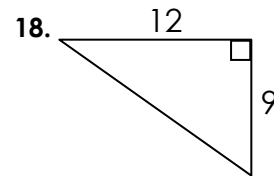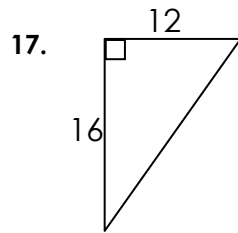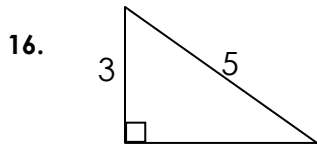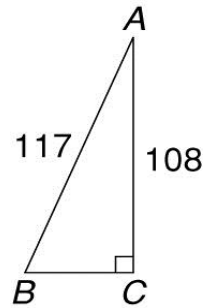
40   50

21.

27

36
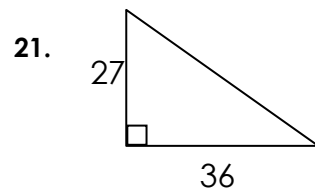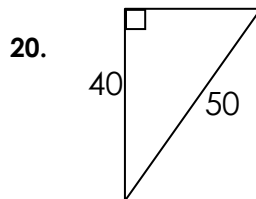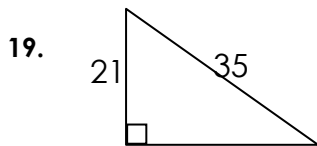
Draw a picture and solve.

22. Stephanie is planning a right triangular garden. She marked one leg that measures 24 ft and the hypotenuse that measures 25 ft. What is the length of the other leg of the garden?

23. A park is in the shape of a rectangle 8 miles long and 6 miles wide. How long is it to walk diagonally across the park?

24. A helicopter rose vertically 300 m and then flew west 400 m. How far was the helicopter from its starting point?

25. A 50-foot cable is stretched from the top of an antenna to an anchor point on the ground 15 feet from the base of the antenna. How tall is the antenna?