Name_____ Date _____

Use the following figure for questions 1 – 4.

Square C

8 inches

Square B

Square A

6 inches
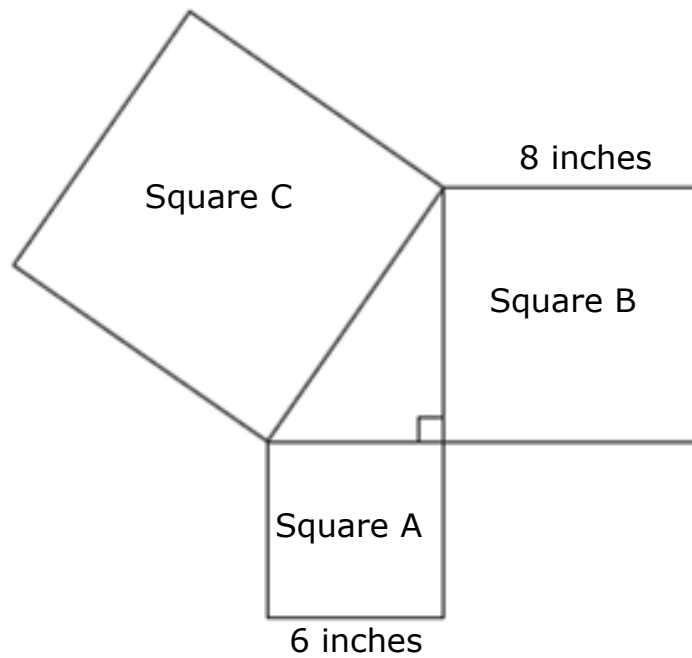
1. What is the area of Square A?

2. What is the area of Square B?

3. What is the area of Square C?
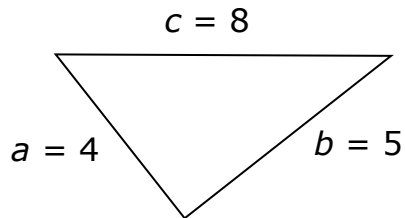
4. What is the side length of square C?

Name_____ Date _____

Use the following information for questions 5 – 7.

For each of the following triangles, determine if the side lengths a, b, and c satisfy the Pythagorean Theorem, $a^2 + b^2 = c^2$.

5.

$c = 13$

$b = 12$

$a = 5$

6.

$c = 8$

$a = 4$

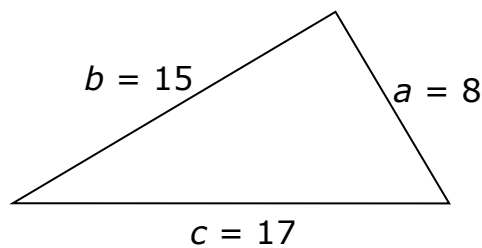$b = 5$
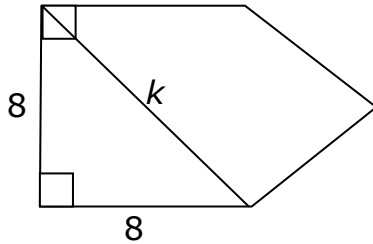
7.

$b = 15$

$a = 8$

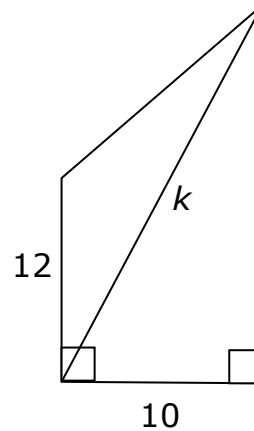$c = 17$

Name_____ Date _____
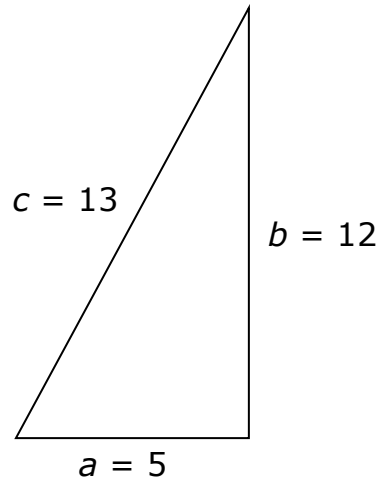
Use the following information for questions 8 – 11.

For each of the following polygons, determine if you have enough information to use the Pythagorean Theorem, $a^2 + b^2 = c^2$, to calculate the length of line segment k. If so, determine the length of line segment k.
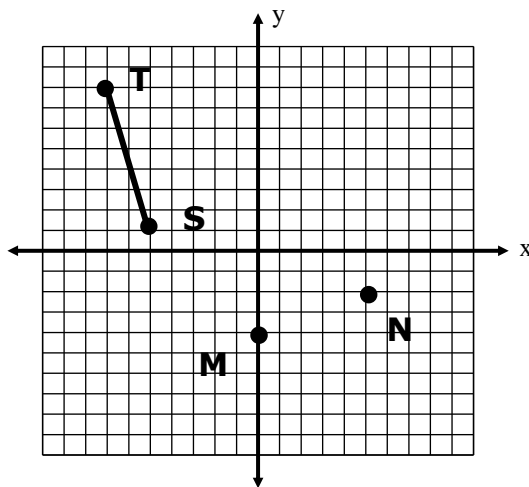
8.

8

k

8

9.

k

12

10

Use the graph for problems 10 – 11.

y

T

S

x

N

M

10. Find the distance between point M and point N to the nearest tenth?

11. What is the length of segment TS?

Solve the problems in questions 12 – 15.

12. A ladder that is 20 feet tall is leaning against a building. Samuel measures that the base of the ladder touches the ground 12 feet from the base of the building. How far from the ground does the top of the ladder touch the building?

13. A rectangular wall has dimensions of 8 feet by 12 feet. A brace board is used to support the wall from one vertex of the wall to the opposite vertex, along the diagonal of the rectangle. About how long is the brace board?

14. Mrs. Nagoya sewed ribbon along the diagonals of a rectangular piece of fabric.

30 cm

40 cm
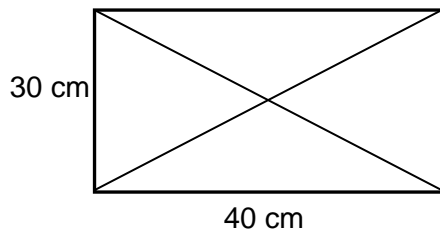
How much ribbon did she use?

15. Mr. Velasquez build a skateboard ramp for his daughter.

3 ft

Ramp

8 ft
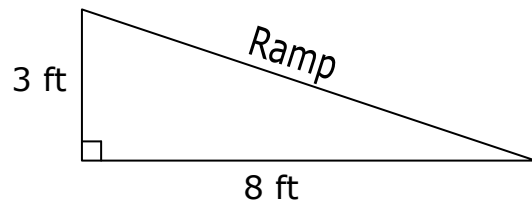
To the nearest foot, what is the length of the ramp?