

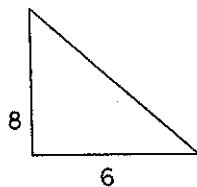
10-3 Homework

Pythagorean Theorem: $a^2 + b^2 = c^2$

Don't forget to show all of your work!!

- 1) What is the length of side c in the right triangle?

- a) 2
b) 10
c) 12
d) 14

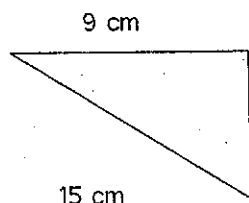


- 4) What is the measure of the hypotenuse in a triangle if the measurements of the legs are 8 and 15?

- a) $\sqrt{161}$
b) 17
c) 23
d) 120

- 2) What is the length of the third side in the right triangle below?

- a) 9 cm
b) 10 cm
c) 11 cm
d) 12 cm



- 5) If a right triangle has a leg that is 4.3 yards long and a hypotenuse that is 9.8 yards long, how long is the other leg, rounded to the nearest tenth?

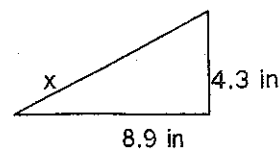
- a) 8.8 yards
b) 9.8 yards
c) 10.8 yards
d) 11.8 yards

- 3) If the lengths of the legs in a right triangle are 15 feet and 20 feet, what is the length of the hypotenuse?

- a) 21 feet
b) 23 feet
c) 25 feet
d) 27 feet

- 6) For the figure below, what is the value of x, rounded to the nearest tenth?

- a) 9.9 inches
b) 13.2 inches
c) 97.7 inches
d) 174.2 inches

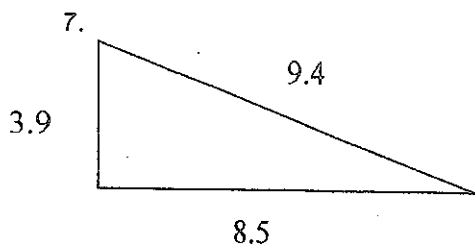


Name: _____

Date: _____

Period: _____

For problems 7 & 8, determine whether the triangles are right triangles. Show your work.



8. If the lengths of the sides of a triangle are 12 inches, 16 inches, and 20 inches, is the triangle a right triangle? Show your

9. A suitcase measures 24 inches long and 18 inches high. What is the diagonal length of the suitcase to the *nearest tenth* of a foot?

10. The size of a TV is labeled by the diagonal length of the screen. If a 32 inch TV is 24 inches wide, how tall is the screen?

11. Two joggers run 8 miles north and then 5 miles west. What is the shortest distance, to the *nearest tenth* of a mile, they must travel to return to their starting point?

12. A 13 foot ladder is placed 5 feet away from a wall. The distance from the ground straight up to the top of the wall is 13 feet. Will the ladder reach the top of the wall?

13. A soccer field is a rectangle 90 meters wide and 120 meters long. The coach asks players to run from one corner to the corner diagonally across. What is the distance?

14. Jill's front door is 42" wide and 84" tall. She purchased a circular table that is 96 inches in diameter. Will the table fit through the door? Explain using the Pythagorean theorem.

15. A handicapped foot ramp connects a platform with a sidewalk that is at ground level. If the platform is 6 feet above ground level, what is the distance from the base of the platform to the sidewalk?