

Name: _____

Due Date: _____

Teacher: _____

Parent Sign: _____

2. A right triangle has legs 3 and 4. Find the hypotenuse.
3. Legs are 5 and 12. Find the hypotenuse.
4. Hypotenuse is 13 and one leg is 5. Find the other leg.
5. Hypotenuse is 10 and one leg is 6. Find the missing leg.
6. Determine whether the triangle with side lengths 6, 8, 10 is a right triangle.
7. Determine whether 7, 24, 25 form a right triangle.
8. Determine whether 8, 15, 17 form a right triangle.
9. Are the sides 9, 12, 15 a right triangle?
10. Legs are $\sqrt{2}$ and $\sqrt{2}$. Find the hypotenuse.
11. One leg is $2\sqrt{3}$ and the other leg is 4. Find the hypotenuse.
12. Legs are 1 and $\sqrt{3}$. Find the hypotenuse.
13. Find the distance between the points (0, 0) and (3, 4).
14. A right triangle has legs 7 and 7. Find the hypotenuse.
15. Hypotenuse is 17 and one leg is 8. Find the other leg.

Pythagorean theorem examples and word problems

16. Find the diagonal of a rectangle that is 6 by 8.
17. Find the diagonal of a square with side length 5.
18. A 10-foot ladder leans against a wall and reaches 8 feet up. How far is the base of the ladder from the wall?
19. A person stands 12 m from a tree. The straight-line distance from the person to the top of the tree is 13 m. How tall is the tree?
20. A right triangle has legs 0.6 and 0.8. Find the hypotenuse.
21. Is a triangle with side lengths 2, 3, 4 a right triangle?
22. In a right triangle, one leg is 9 and the hypotenuse is 15. Find the other leg.
23. A rectangle measures 9 by 12. Find its diagonal.
24. Find the hypotenuse of a right triangle with legs 20 and 21.
25. Hypotenuse is 25 and one leg is 7. Find the missing leg.
26. A painting is 3 ft tall and 4 ft wide. What is the length of its diagonal?
27. If a right triangle has legs 6 and 8, find the hypotenuse.
28. A right triangle has hypotenuse $\sqrt{50}$ and one leg 5. Find the other leg.
29. Find the distance between points (-1, 4) and (6, -2).
30. Find the hypotenuse of a right triangle with legs 11 and 60.
31. A ramp is 13 ft long and reaches a platform 5 ft high. How far is the bottom of the ramp from the platform base?



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Math Worksheet for 8th Grade Pythagorean theorem

32. A baseball diamond has right triangle distances of 30 ft and 40 ft along perpendicular directions. What is the straight-line distance between those two points?
33. Are 14, 48, 50 the side lengths of a right triangle?
34. Find the hypotenuse of a right triangle with legs 2 and 3.
35. A triangular lot has perpendicular sides of length 12 and 35. Find its hypotenuse.
36. In a right triangle the legs are x and $x + 1$ and the hypotenuse is 29. Find x and $x + 1$.
37. Find the distance between $(2, 3)$ and $(7, 11)$.
38. A 17-foot ladder leans against a wall and reaches 8 feet up. How far is the base from the wall?
39. Find the side length of a square whose diagonal is 12.
40. A right triangle has legs 13 and 84. Find the hypotenuse.

Pythagorean theorem with isosceles triangles

41. An isosceles right triangle has equal legs of length 5. Find the hypotenuse.
42. An isosceles triangle has equal sides 13 and base 10. Find the altitude from the top vertex to the base.
43. Equal sides are 10 and the base is 12 in an isosceles triangle. Find the altitude.
44. An isosceles right triangle has legs 6. Find its area.
45. An isosceles triangle has equal sides 5 and base 6. Find the altitude.
46. An isosceles triangle has base 8 and altitude 6. Find the length of each equal side.
47. The two equal sides of an isosceles triangle are 13 and the base is 10. Find the altitude. (Repeat of #42 intentionally as a word-check.)
48. Equal sides are 17 and base is 16 in an isosceles triangle. Find the altitude.
49. An isosceles triangle has equal sides 10 and base 14. Find the altitude.
50. A triangular sail is isosceles with height 12 and base 10. Find the length of each equal side.