1. Find the length of the side PR.



1. Find the lengths of the other two sides of a right triangle if the length of the hypotenuse is $4\sqrt{2}$ and one of the angles is 450?
2. Figure DEFG is a square. If EG=4, what is the area of the square?
3. 4
4. $4\sqrt{2}$
5. 8
6. 16
7. 32
8. An equilateral triangle has a side with a length of 10. What is the area of the triangle?
9. $5\sqrt{2}$
10. 25
11. $25\sqrt{3}$
12. $50\sqrt{3}$
13. $100\sqrt{2}$
14. Points A(1, 0), B(8, 0), and C(3, 4) are the vertices of a triangle. What is the area of this triangle?
15. 5
16. 10.5
17. 14
18. 16
19. 28
20. A boat travels to a small island. The island is located 9 miles east and 12 miles north of the boat’s departure point. About how many miles is the island from the departure point?
21. 3
22. 15
23. 21
24. 225
25. $\sqrt{63}$
26. A triangle has sides of length 4 inches and 7.5 inches. Which of the following cannot be the length of the third side?
27. 3.0 inches
28. 4.0 inches
29. 5.0 inches
30. 5.5 inches
31. 9.5 inches
32. What is the perimeter of a 30-60-90 triangle with a long leg of 12 inches?
33. $6\sqrt{3}+12$
34. $4\sqrt{3}+18$
35. $6\sqrt{3}+18$
36. $12\sqrt{3}+12$
37. $12\sqrt{3}+18$
38. Points Y and Z lie on the circle with center O such that arc YOX is equilateral. What is the probability that a randomly selected point in the circle lies inside minor arc YZ?
39. 1/360
40. 1/60
41. 1/6
42. 6/10
43. 5/6
44. Two spheres, on with radius 14 and one with radius 8, are tangent to each other. If T is any point on one sphere and W is any point on the other sphere, what is the maximum possible length of TW?
45. 14
46. 22
47. 28
48. 36
49. 44
50. If the length of a minor arc formed by two radii in a circle is 1/40 of the circumference, what is the arc’s measurement in degrees?
51. 3
52. 6
53. 9
54. 12
55. 15
56. If the point (8, 6) lies on a circle with a center at (0, 0) what is the area of the circle?
57. $18π$
58. $36π$
59. $48π$
60. $64π$
61. $100π$
62. ABCD is a rectangle. If the area of triangle ABE is 40, what is the area of the rectangle?
63. 20
64. 28
65. 40
66. 80
67. 112
68. In a square EFGH, GH = 3, what is the length of the diagonal FH?
69. $3\sqrt{2}$
70. $3\sqrt{3}$
71. 6
72. $6\sqrt{2}$
73. 9
74. Two lines, q and l, which never intersect, are both tangent to circle T. If the smallest distance between any point on q and any point on l is four less than triple that distance, what is the area of circle T?
75. $π$
76. $\frac{π}{4}$
77. $2π$
78. $4π$
79. $9π$