2. An isosceles triangle has base 14 cm and equal sides 10 cm. Find its area.

3. An isosceles triangle has base 12.5 cm and equal sides 13 cm. Find its area (round to 2 decimal places).

4. An isosceles triangle has base 18 cm and equal sides 10 cm. Find its area.

5. An isosceles triangle has base 8 cm and equal sides 5 cm. Find its area.

6. An isosceles triangle has base 24 cm and equal sides 17 cm. Find its area.

7. An isosceles triangle has base 6 cm and equal sides 5 cm. Find its area.

8. An isosceles triangle has base 9 cm and equal sides 6 cm. Find its area (give an exact radical form and a decimal approximation).

9. An isosceles triangle has base 20 cm and equal sides 13 cm. Find its area.

10. An isosceles triangle has base 7 cm and equal sides 5 cm. Find its area (round to 2 decimal places).

11. An isosceles triangle has base 15 cm and equal sides 13 cm. Find its area (round to 2 decimal places).

12. An isosceles triangle has base 4 cm and equal sides 5 cm. Find its area (exact form).

13. An isosceles triangle has base 11 cm and equal sides 10 cm. Find its area (round to 2 decimal places).

14. An isosceles triangle has base 30 cm and equal sides 26 cm. Find its area (round to 2 decimal places).

15. An isosceles triangle has base 4 cm and equal sides 3 cm. Find its area (exact form).

Pythagorean theorem word problems: carpet (diagonals / fitting through openings / length across a room)

16. A rectangular carpet measures 8 m by 6 m. What is the length of its diagonal? Would it fit through a door that is 9 m wide if you tried to carry it diagonal-first?

17. A carpet is 12 ft by 5 ft. What is the diagonal length of the carpet?

18. A carpet is 9 ft by 4 ft. What is its diagonal (give exact radical and decimal approx)? Will it fit through a 9 ft wide doorway without bending?

19. A carpet measures 7.2 m by 3.6 m. Find the diagonal length (round to 2 decimals).

20. A rectangular room is 15 ft by 20 ft. What is the longest straight line distance across the room (diagonal)?

21. A carpet 9 ft by 14 ft needs to be carried through a hallway that is 13 ft wide. What is the carpet's diagonal? Can it pass straight through without tilting?

22. A carpet is 10 ft by 6 ft. Will it fit into a square room that is 11 ft by 11 ft if placed diagonally? (Find the carpet diagonal to decide.)

23. A small rug is 4.5 m by 3.0 m. What is the diagonal? Will it fit through a doorway 5.5 m wide?

24. A carpet is 13 ft by 5 ft. How long is its diagonal (round to 2 decimals)?

25. A carpet is 6.6 m by 2.8 m. Find the diagonal (round to 2 decimals).

26. A rug measures 3.0 m by 1.5 m. Find its diagonal (round to 3 decimal places).

27. A carpet is 11 ft by 6 ft. Find the diagonal (round to 2 decimals).

28. A carpet is 5 ft by 12 ft. Find the diagonal.

29. A carpet measures 14 ft by 9 ft. What is the diagonal (round to 2 decimals)?

30. A carpet measures 3.2 m by 2.4 m. Find its diagonal.

Pythagorean theorem word problems: fishing boat / waterfront scenarios

31. A fisherman's hook reaches 5 m below the water surface and the fish is 12 m away horizontally from the boat. How long is the fishing line from boat to fish?

32. A buoy is 12 m due north of a dock. A boat is 5 m west of the buoy. How far is the boat from the dock (straight-line distance)?

33. A boat is anchored 8 m from a buoy. The buoy is 15 m from the pier in a straight line perpendicular to the pier. What is the distance from the boat to the pier?

34. A fisherman drops a line that reaches a fish 10 m horizontally from the boat and 6 m below the water's surface. What length of line does he need (round to 2 decimals)?

35. A boat is 10 m offshore (perpendicular distance from shore) and 24 m along the shore from a pier. What is the straight-line distance from the boat to the pier?

36. A fisherman casts toward a fish that is 3 m out horizontally and 4 m down. How long is his line?

37. An anchor chain runs 30 m horizontally from the boat to the anchor point and the water depth at that point is 12 m. How long is the anchor chain (ignore slack)?

38. A boat is 7 km east and 24 km north of a lighthouse. How far is the boat from the lighthouse (straight-line)?

39. A fishing boat is 18 m east and 24 m north of a known rock. What is the straight-line distance to the rock?

40. A diver swims 9 m horizontally from a boat and then dives 12 m vertically to a point. How long is the straight-line path from the boat to the diver's position?

Pythagorean theorem in 3D (distances in rectangular solids, room diagonals, etc.)

41. Find the space diagonal (corner-to-opposite-corner) of a rectangular box with sides 3 m, 4 m, and 12 m.

42. Find the space diagonal of a box with side lengths 6 m, 8 m, and 10 m.

43. A rectangular room is 8 m long, 6 m wide and 3 m high. What is the distance from one bottom front corner to the opposite top back corner?

44. A box has base 2 m by 3 m and height 4 m. Find the diagonal from a bottom corner to the opposite top corner.

45. A rectangular prism has edges 9 m, 12 m, and 4 m. Find the space diagonal (round to 2 decimals).

46. A flagpole of height 10 m stands on top of a building. A point on the ground is 12 m east and 5 m north of the building's base. What is the straight-line distance from that ground point to the top of the flagpole (round to 2 decimals)?

47. Find the space diagonal of a box with length 7 m, width 24 m, and height 1 m (round to 2 decimals).

48. What is the distance between opposite corners of a cuboid with edges 3 m, 3 m, and 6 m? (Give exact radical and decimal approximations.)

49. A tower is 25 m tall. A point on the ground is 20 m east and 15 m north of the tower base. What is the straight-line distance from the point to the top of the tower (exact and decimal)?

50. A rectangular swimming pool is 10 m by 6 m and 2 m deep. Find the straight-line distance from one corner on the pool deck (top edge) to the opposite corner at the bottom of the pool.