

Worksheet on Using the Pythagorean Theorem

Solve using the Pythagorean theorem.

- ① A wire is stretched from the top of an 8 ft pole to a bracket, which is 5 ft from the base of the pole. Find the length of the wire.

- ② A ship leaves port and sails 12 km west and then 19 km north. Find the shortest distance of the ship from the port.

- ③ An anchor line for a tower needs to be replaced. The tower is 96 ft tall and the anchor line is 105 ft long. How far from the tower is one end of the anchor line placed?

- ④ An inclined plane rises upto 4 m over a horizontal distance of 9 m. How long is the ramp?

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Answers

- ① A wire is stretched from the top of an 8 ft pole to a bracket, which is 5 ft from the base of the pole. Find the length of the wire.

9.43 ft

- ② A ship leaves port and sails 12 km west and then 19 km north. Find the shortest distance of the ship from the port.

22.47 km

- ③ An anchor line for a tower needs to be replaced. The tower is 96 ft tall and the anchor line is 105 ft long. How far from the tower is one end of the anchor line placed?

42.53 ft

- ④ An inclined plane rises upto 4 m over a horizontal distance of 9 m. How long is the ramp?

9.85 m