Pythagorean Theorem in Three Dimensional Figures

1. The floor of a room is 6 m by 4 m, and its height is 3 m. Find the distance from a corner point on the floor to the opposite corner point on the ceiling.

$\sqrt{61}$ **m** between 7 and 8 m

approx. 7.8 m

1. A cube has sides of length 3 cm. Find the length of a diagonal of the cube.

$\sqrt{27}$ **cm** between 5 and 6 cm

approx. 5.2 cm

1. Determine the length of the longest piece of timber which could be stored in a rectangular shed 6 m by 5 m by 2 m high.

$\sqrt{65}$ **m** between 8 and 9 m

approx. 8.06 m

1. A cone has a slant height of 17 cm and a base radius of 8 cm. How high is the cone?

$15$ **cm**

1. A 50 m rope is attached inside an empty cylindrical wheat silo of diameter 12 m as shown. How high is the wheat silo?

$\sqrt{2356}$ **m** between 48 and 49 m

approx.. 48.5 m