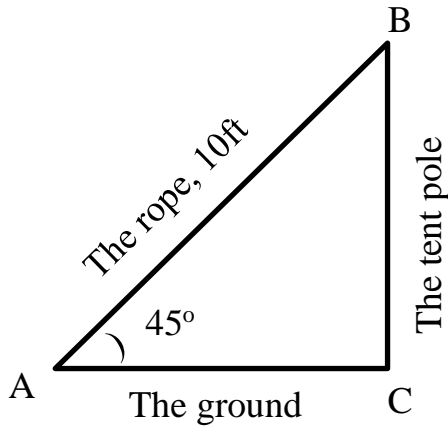


## Answer on Question #63476 – Math – Trigonometry

### Question

A 10-foot rope connects the top of the tent pole to the ground. If the rope makes an angle of 45 degree with the ground, find the length of the tent pole.

### Solution



We have a right triangle  $\triangle ABC$ , where the rope is the hypotenuse  $AB=10\text{ft}$ , and the tent pole is opposite side  $BC$ .

$$\text{So } BC = AB \sin A = 10 \sin 45^\circ = 10 \frac{1}{\sqrt{2}} \approx 7.1 \text{ft.}$$

**Answer:** The length of the tent pole is 7.1 ft.