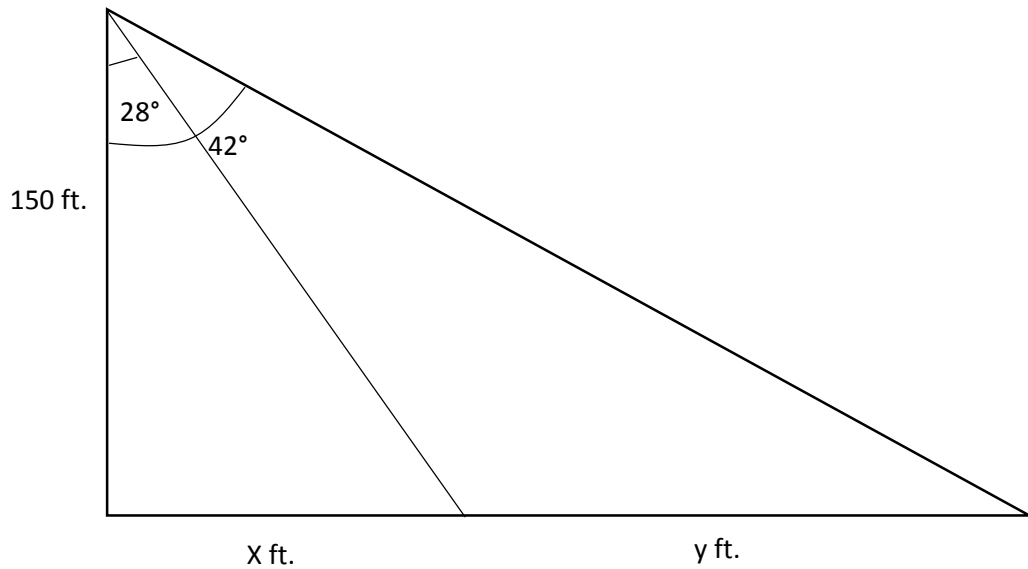


**Answer on question 34179 – Math – Geometry**

An observer is posted 150 ft. above water level and records two angles of depression to a boat as the boat heads toward shore. The first was  $28^\circ$  and the second was  $42^\circ$ . How far did the boat travel in the time between the two recordings?

**Solution**



Using the definition of sine we get

$$x = 150 \sin 28 \approx 70.42;$$

$$x + y = 150 \sin 42 \approx 100.37$$

Therefrom

$$y = 29.95 \text{ ft.}$$

**Answer:** 29.95 ft.