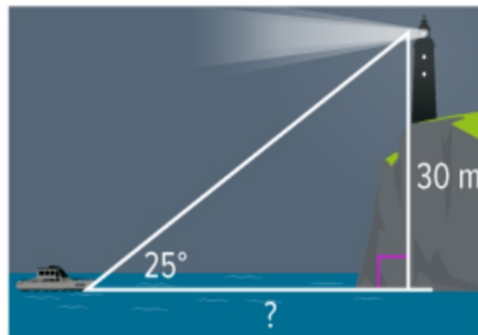


- 8) **LIGHTHOUSES** Sailors on a ship at sea spot the light from a lighthouse at an angle of elevation of 25° . The light of the lighthouse is 30 meters above sea level. How far from the shore is the ship? Round your answer to the nearest meter.

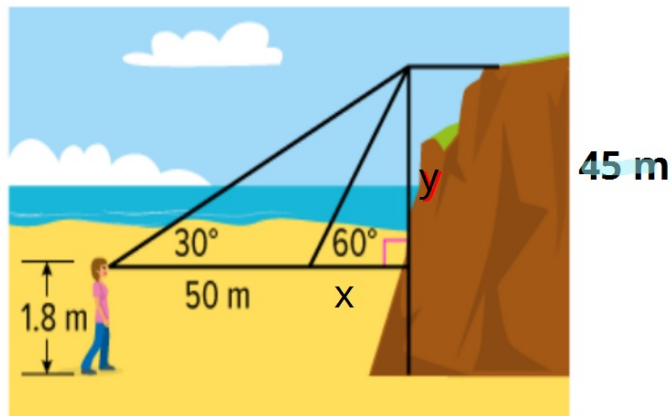
64 m
Blank 1



- 9) **Part B:**
It takes the ship 10 seconds to travel to the shore. If the ship traveled from a city 30 miles away and maintained a constant speed until it docked at shore, then for how long was the ship traveling? Round your answer to the nearest tenth of an hour.

2.1 hr
Blank 1

- 14) **CLIFF** Sarah stands on the ground and sights the top of a steep cliff at a 60° angle of elevation. She then steps back 50 meters and sights the top of the cliff at a 30° angle. If Sarah is 1.8 meters tall, how tall is the cliff to the nearest meter?



$$\tan 60 = y/x$$

$$\tan 30 = y/x+50$$

$$x(\tan 60) = y$$

$$\tan 30 = \frac{x(\tan 60)}{x+50}$$

$$(x+50)(\tan 30) = x(\tan 60)$$

$$.577x + 28.87 = 1.7x$$

$$25 = x$$

$$\tan 60 = y/25$$

$$43 = y$$

$$43 + 1.8 = 45$$