

Warm up is Warmup before Quiz 1.doc

Homework

1) 22.6° 2) 17.1° 3) 48.2° 4) 50.0° 5) 28.8°

6) 36.9° 7) 66.4° 8) 45°

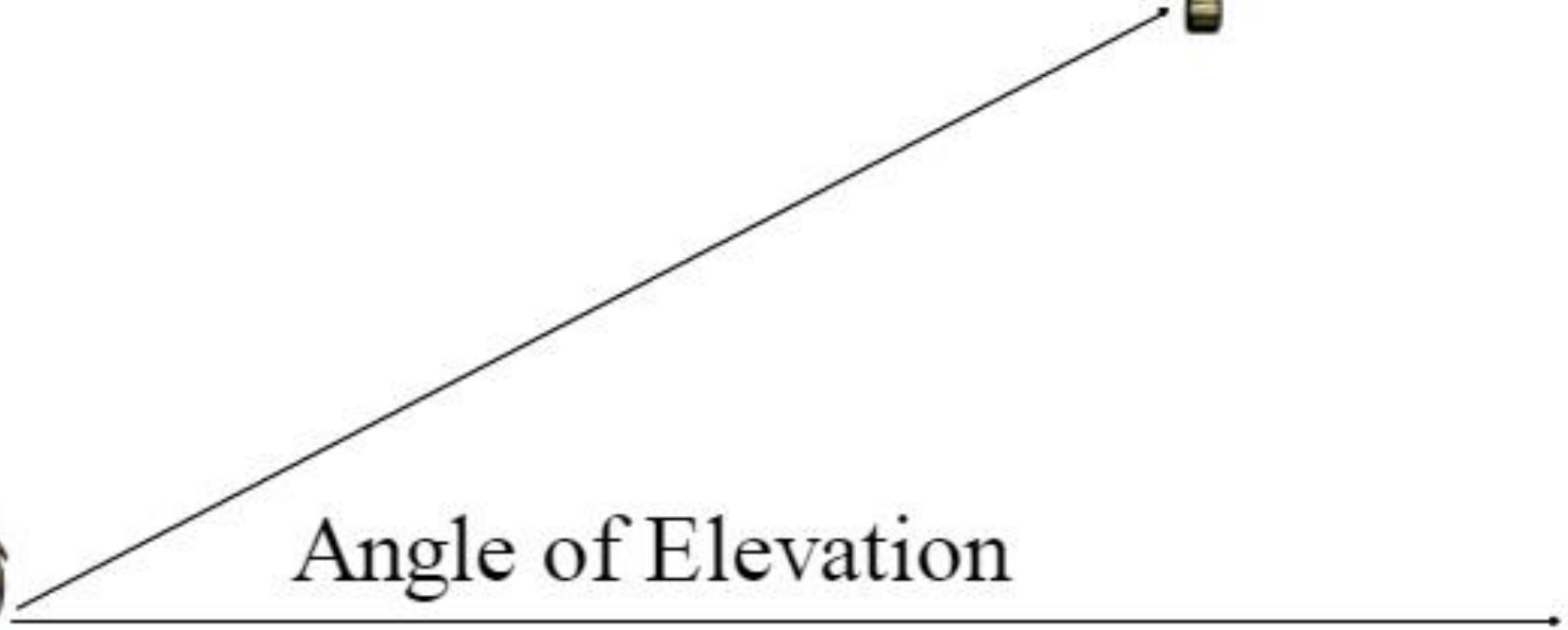
In 9-12, solve for unknown side and angle using trig functions!

9) $13.8 ; 53^\circ$ 10) $8.1 ; 58^\circ$ 11) $6.0 ; 39.9$ 12) $5.5 ; 30^\circ$

Notes

Kennedy is looking at a hot-air balloon floating overhead.

The angle of her line-of-sight is the Angle of Elevation.



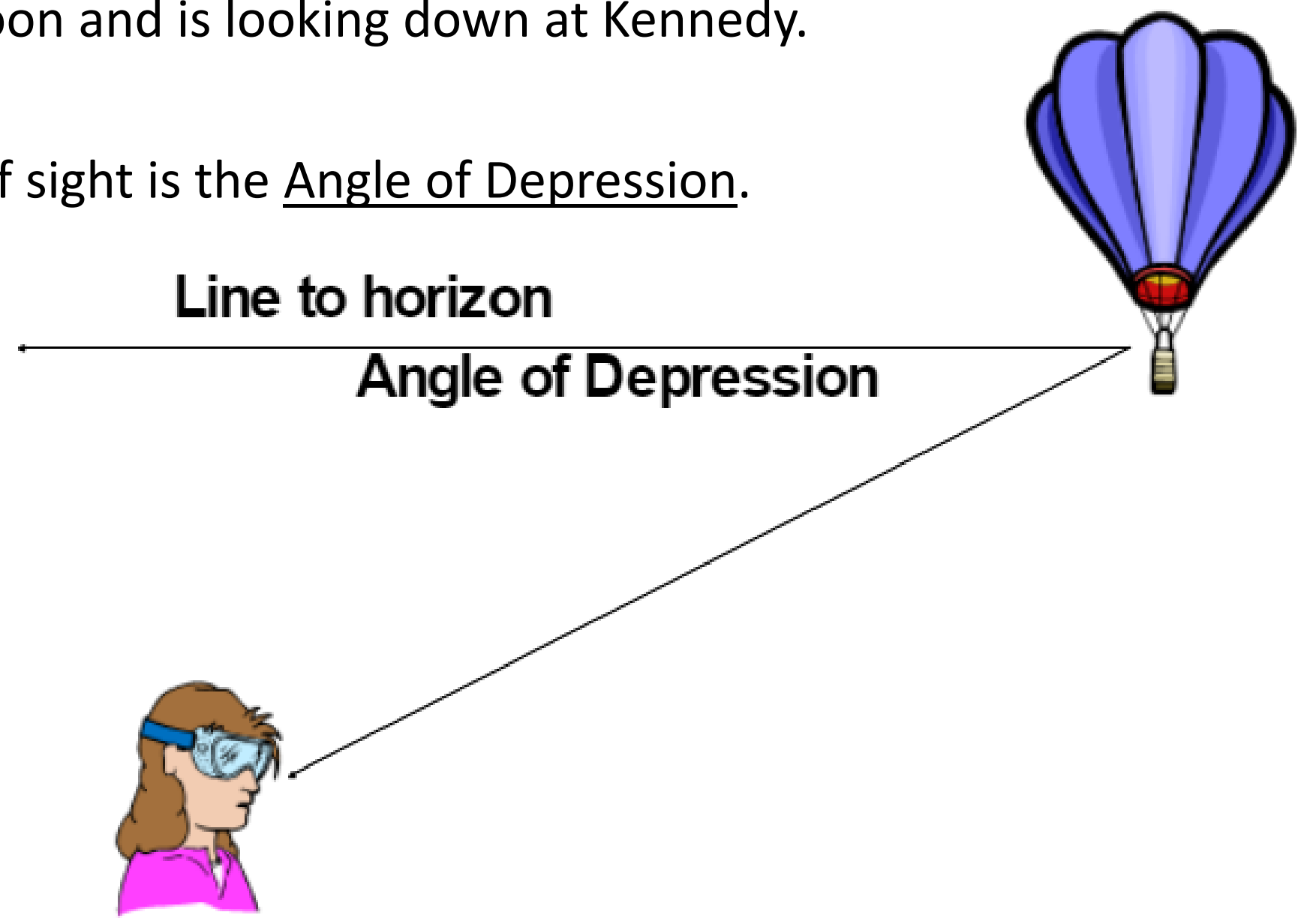
Angle of Elevation

Line to horizon

Notes

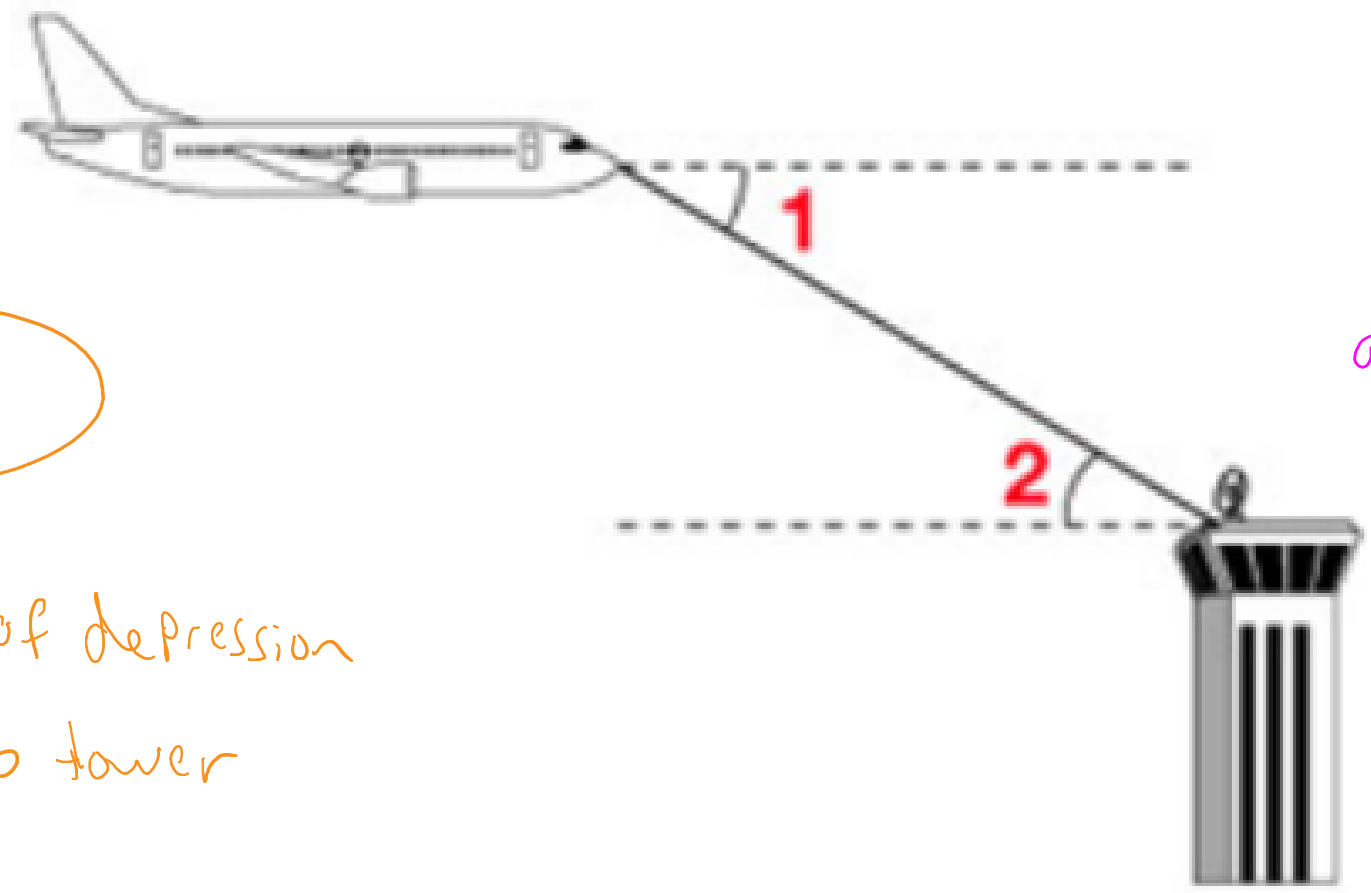
Carducci is in the balloon and is looking down at Kennedy.

The angle of his line-of sight is the Angle of Depression.



Notes

Describe angles 1 and 2 as they relate to the situation shown below.

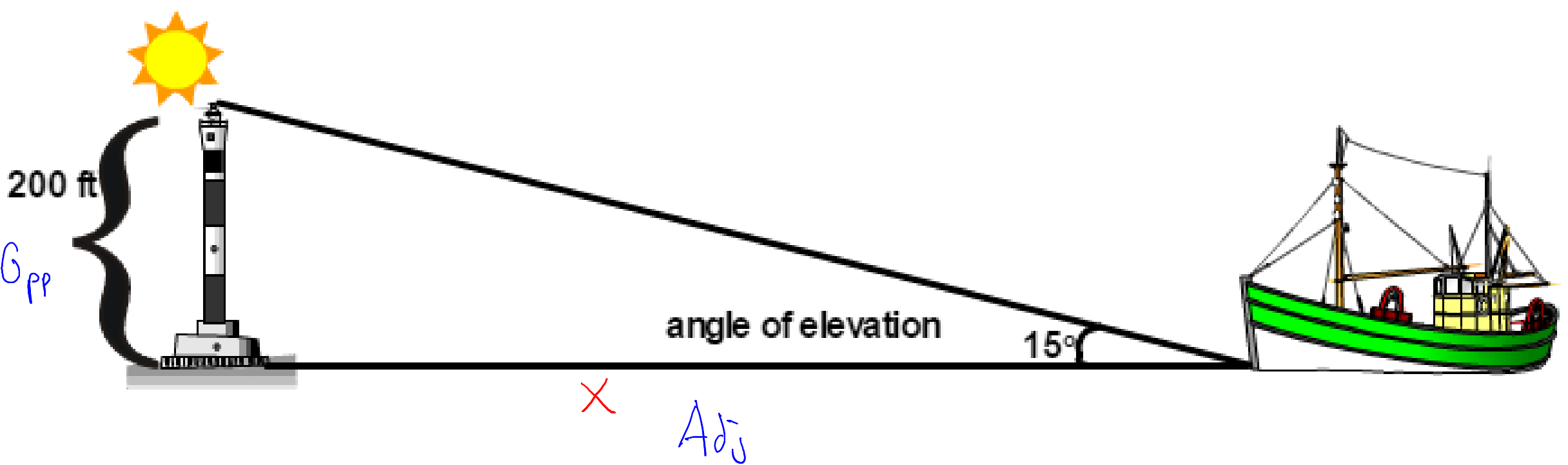


$\angle 1 \cong \angle 2$

$\angle 1$ is angle of depression
from plane to tower

$\angle 2$ is
angle of elevation
from tower
to plane

Notes



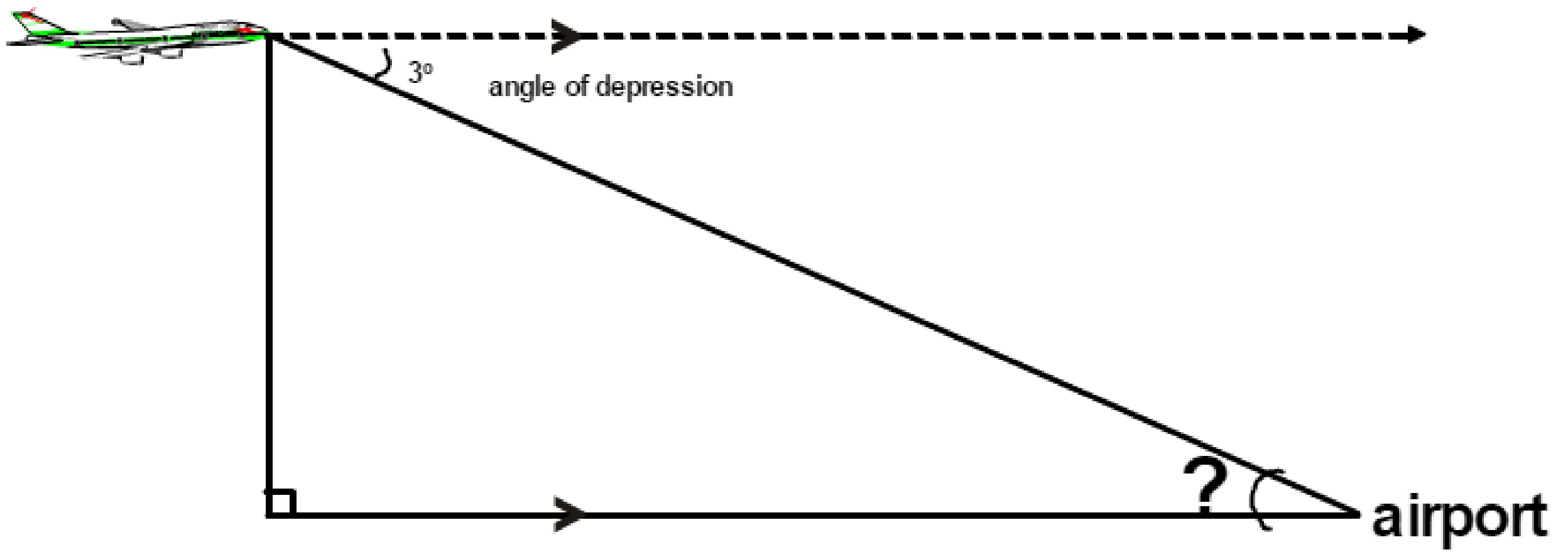
How far is the ship from the lighthouse?

$$S = \frac{O}{H} \quad C = \frac{A}{H} \quad T = \frac{O}{A}$$

$$x \cdot \tan(15^\circ) = \frac{200}{x}$$

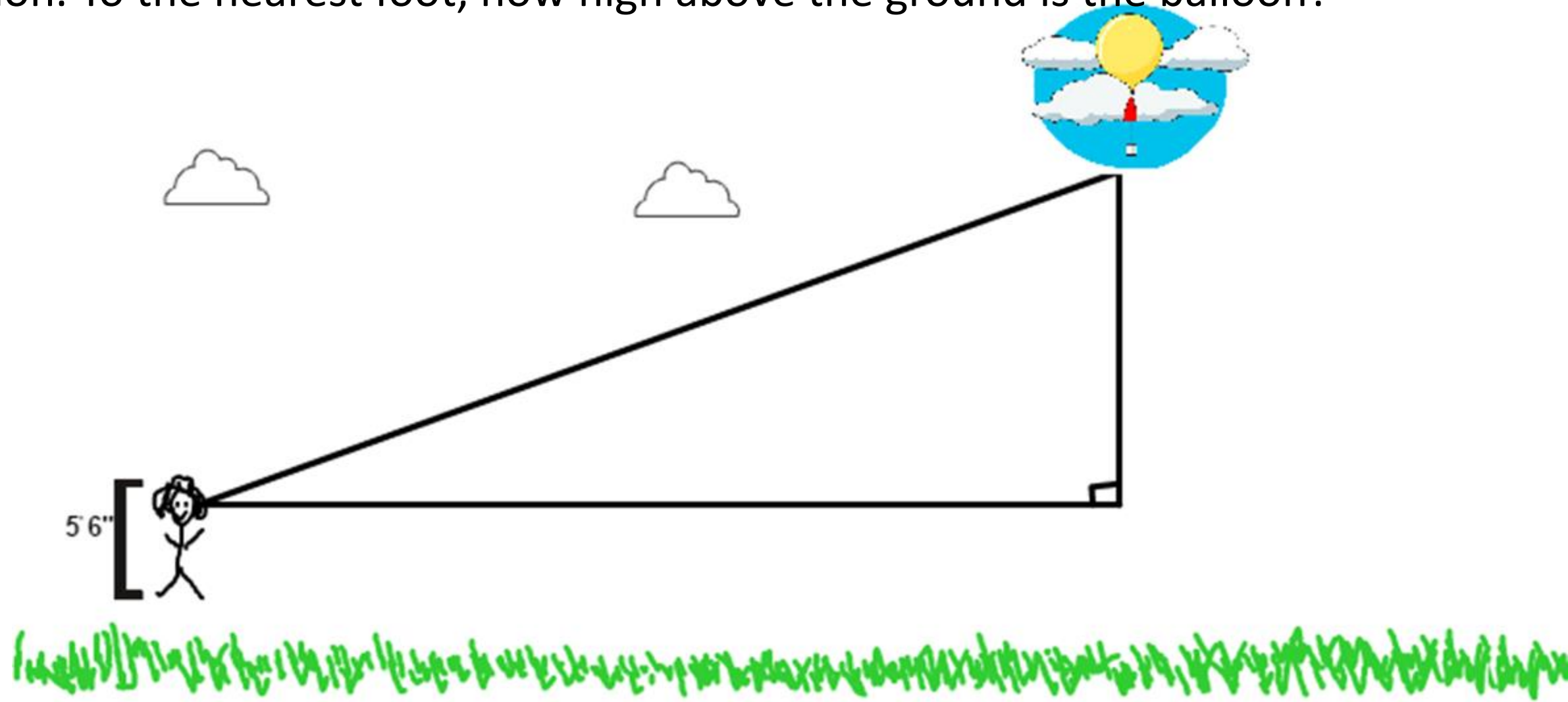
Notes

An airplane flying 3500 ft above the ground begins a 3° descent to land at an airport. How many miles from the airport is the airplane when it starts its descent?



Notes

Katana is a meteorologist. She measures the angle of elevation of a weather balloon at 41° . A radio signal from the balloon indicates it is 1587 yards from her location. To the nearest foot, how high above the ground is the balloon?



Notes

Josh wants to measure the distance across a pond. He knows the height of a tree on the other side is 27 feet, and the angle of elevation is 18° from his tripod. Josh's tripod is 3 feet tall. Use trigonometry to find the distance across the pond to the nearest tenth of a foot.

