

Day 5 HW (8.4 Day 2) Worksheet

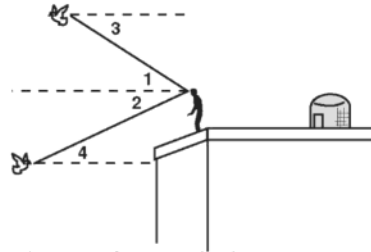
Friday, January 19, 2018 9:33 AM



Day 5 HW (8.4 Day 2) Worksheet

Marco breeds and trains homing pigeons on the roof of his building. Classify each angle as an angle of elevation or an angle of depression.

1. $\angle 1$ elevation
2. $\angle 2$ depression
3. $\angle 3$ depression
4. $\angle 4$ elevation



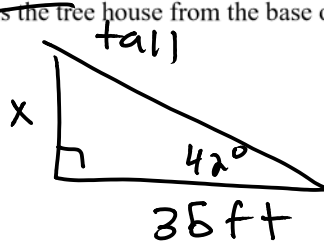
5. Find the measure of the angle of elevation from the sun when a 6 foot vertical post casts a shadow 8 feet long.



$$\tan x = \frac{6}{8}$$

$$x = 37^\circ$$

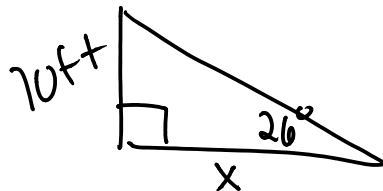
6. The angle of depression from a tree house to the base of a house is 42° . The tree is 35 feet from the base of the house. How far is the tree house from the base of the house?



$$\tan 42 = \frac{x}{35}$$

$$x = 31.5 \text{ ft}$$

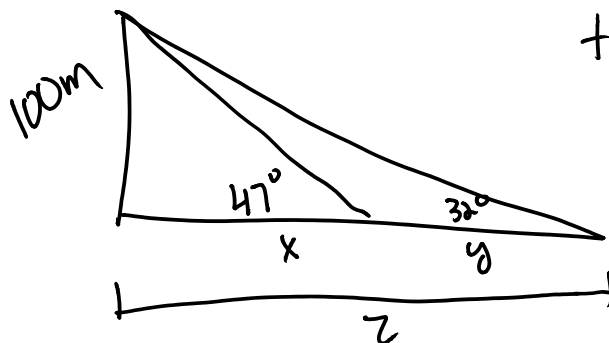
7. The angle of elevation from a ship to the top of a 70 foot lighthouse on the coast measures 26° . How far from the coast is the ship?



$$\tan 26 = \frac{70}{x}$$

$$x = 143.5 \text{ ft}$$

8. An observer on a cliff, 100 meters above sea level sights two ships due east. The angles of depression of the ships are 47° and 32° . Find, to the nearest meter, the distance between the ships.



$$\tan 32 = \frac{100}{z}$$

$$z = \boxed{67 \text{ m}}$$

$$z = 160.03$$

$$\tan 47 = \frac{100}{x}$$

$$x = 93.25$$