Name _Key_   Class _____ Date _____

Practice 8-5

Describe each angle as it relates to the diagram.

1. a. ∠1
   b. ∠2
   c. ∠3
   d. ∠4
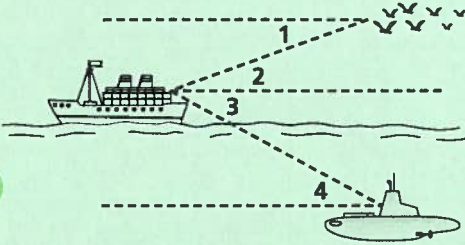
2. a. ∠1
   b. ∠2
   c. ∠3
   d. ∠4
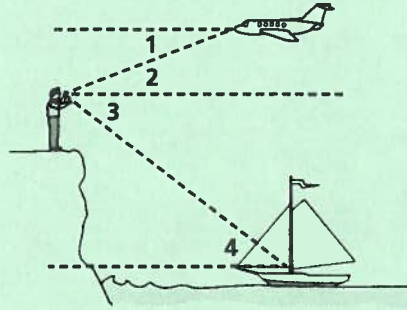
SOH CAH TOA

Find the value of x. Round the lengths to the nearest tenth.

3. H O x 25° 250 ft A

$\tan 25 = \dfrac{x}{250}$ $\boxed{116.6}$
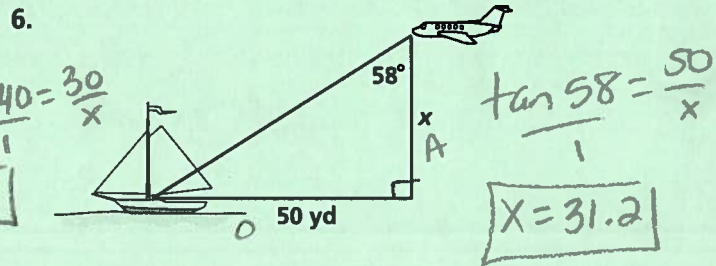
4. 100 ft H O 32° x A

$\cos 32 = \dfrac{x}{100}$ $\dfrac{}{1}$ $\boxed{84.8}$

5. H x O 30 ft 40° A

$\sin 40 = \dfrac{30}{x}$ $\dfrac{}{1}$ $\boxed{x = 46.7}$

6. 58° x A 50 yd O

$\tan 58 = \dfrac{50}{x}$ $\dfrac{}{1}$ $\boxed{x = 31.2}$

7. 28° 60 m O x H

$\sin 28 = \dfrac{60}{x}$ $\dfrac{}{1}$ $\boxed{x = 127.8}$

8. O x H 22° 300 m light A meteorology station

$\cos 22 = \dfrac{300}{x}$ $\dfrac{}{1}$ $\boxed{323.6}$
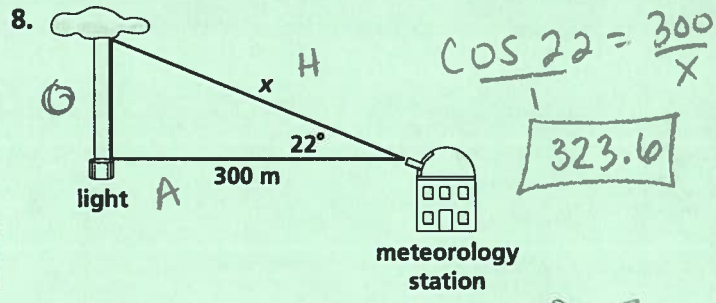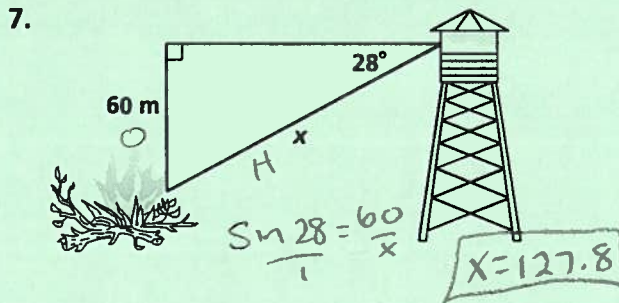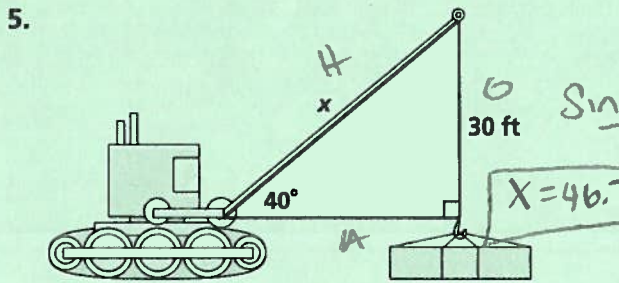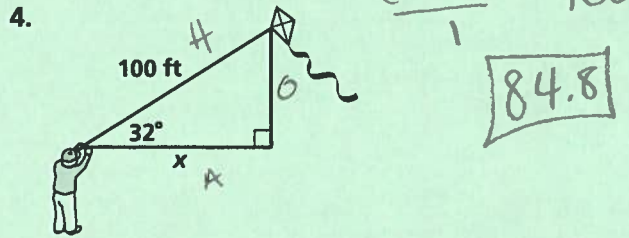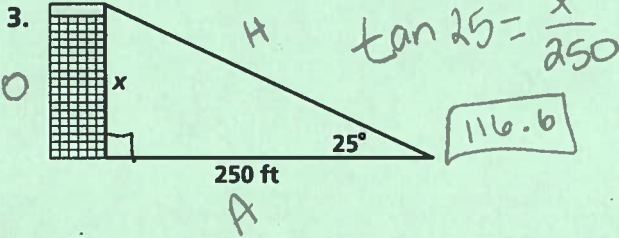
9. A person standing 30 ft from a flagpole can see the top of the pole at a 35° angle of elevation.

   a. Draw a diagram.

   b. The person's eye level is 5 ft from the ground. Find the height of the flagpole to the nearest foot.

   35° x H 30 5ft 30 ft

   $\tan 35 = \dfrac{x}{30}$ $\dfrac{}{1}$

   $x = 21.$ $+ \ 5$ $\boxed{26 ft}$