Trigonometry Homework #1

In 1 – 4, find the sine, cosine, and tangent of the acute angles of the triangle. (Hint: Use the Pythagorean Theorem to solve for the unlabeled side.)



AB=\_\_\_\_\_\_\_\_\_ FE= \_\_\_\_\_\_\_\_ GH= \_\_\_\_\_\_\_\_\_\_ JK=\_\_\_\_\_\_\_\_\_\_\_

Sin J= \_\_\_\_\_\_

Cos J= \_\_\_\_\_

Tan K= \_\_\_\_\_

Sin H= \_\_\_\_\_\_

Cos G= \_\_\_\_\_

Tan G= \_\_\_\_\_

Sin F= \_\_\_\_\_\_

Cos F= \_\_\_\_\_

Tan F= \_\_\_\_\_

Sin A= \_\_\_\_\_\_

Cos A= \_\_\_\_\_

Tan A= \_\_\_\_\_

In 5 – 8, find the length of the labeled sides (the missing variables).

5. 6. 7. 8.

9. A train is traveling up a slight grade with an angle of inclination of only 2$°$. After traveling 1 mile, what is the vertical change in feet?

In 10 & 11, use the figure of the lighthouse.

10. At 2 p.m., the shadow of a lighthouse is 22 feet long and the angle of elevation
 is 72$°$. Find the height of the lighthouse.

11. At 6 p.m., the angle of elevation (bottom angle in image) of the sun is 40$°$.

Find the length of the shadow cast by the lighthouse.