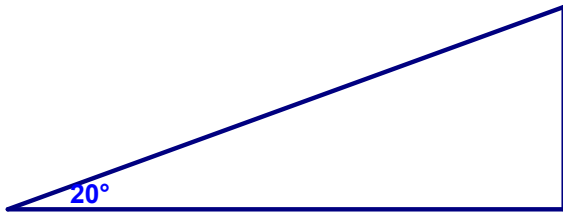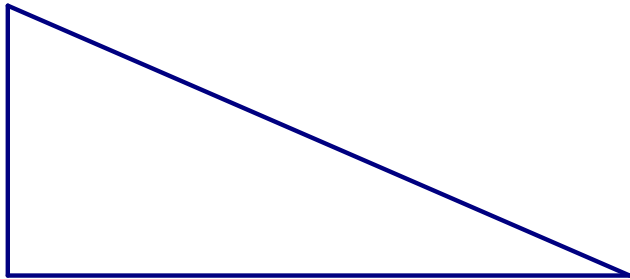**4.8 – Word Problems again!!**

Review of Right Triangle Word Problems

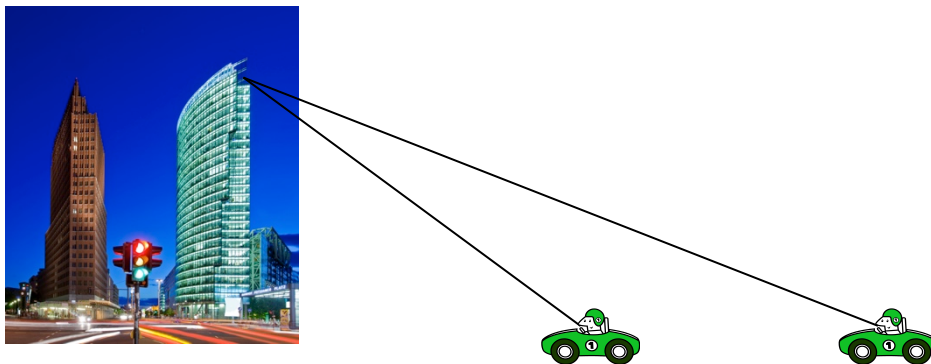1) The sun is 20° above the horizon. Find the **length of a shadow** cast by a building that is 600 feet tall.

2) A cellular telephone tower that is 150ft tall is placed on top of a mountain that is 1200ft above sea level. **What is the angle of depression** from the top of the tower to a cell phone user who is 5 horizontal miles away and 400 feet above sea level?

Slightly more complex

3) From the top of a 100 foot building a man observes a car moving toward the building. If the angle of depression of the car changes from 22° to 46° during the period of observation, how far does the car travel?

4.8 – Word Problems again!!

4) A plane is observed approaching your home and you assume that its speed is 550 miles per hour. The angle of elevation of the plane is 16° right now and 57° one minute later. Approximate the altitude of the plane.

4.8 – Word Problems again!!

Course and Bearing: The biggest thing to know is that NORTH is degree 0 (instead of east, like it normally is on the x-axis)

6) The Coast Guard Cutter travels at 30 knots (nautical miles) from its home port of Corpus Christi on a course of 95° for 2 hours, and the changes to a course of 185° for 2 hours. Find the **distance** and **bearing** from the Corpus Christi port to the boat.

7) A jet leaves Reno, Nevada and is headed toward Miami, Florida at a bearing of 100°. The distance between the two cities is approximately 2472 miles.

   a) How far north and how far west is Reno relative to Miami?

   b) If the jet is to return directly to Reno from Miami, at what bearing should it travel?

HW: 4.8 p.359-361 #3,8,17,21,26,31,34,37,40