1. You are designing a line-of-sight communications system between two towns that are 40km apart. The receiving antenna is at a height of 150ft AGL (Above Ground Level). You can place the transmitting antenna on top of a building 50ft AGL.

   (a) Determine whether the antennas will have LOS. LOS? = [ ]

   (b) Determine the max LOS range for this setup. R = [ ]

2. You are flying a drone at the maximum legal height of 400ft AGL. What will be your maximum LOS distance (in km), assuming you are standing at 0ft AGL?

   $R_{LOS}$ = [ ]

3. If your drone falls to 150ft AGL, what is the new maximum LOS distance (in km)?

   $R_{LOS}$ = [ ]