

Math 29
In-class Problems on Trigonometry

1. An airplane is flying towards Maria, travelling at a constant altitude of 3000 feet and at a speed of 293 ft/sec . Just as the angle of elevation of the airplane (relative to where Maria is standing on the ground) is 20° , the plane makes a loud noise.
 - a) Given that sound travels at a speed of 1100 ft/sec , how long does it take the noise to reach Maria?
 - b) At the moment when Maria hears the noise, how far is the airplane from Maria?
2. A balloon is flying between points A and B which are 8.4 miles apart on level ground. From point A the angle of elevation is 18° and from point B the angle of elevation is 12° . What is the height of the balloon?