Example 1: A television camera at ground level is filming the lift-off of a space shuttle at a point 750 meters from the launch pad. Let $\theta$ be the angle of elevation to the shuttle and let $S$ be the height of the shuttle. Then write $\theta$ as a function of $S$ and find $\theta$ when $S = 300$ meters.

Example 2: From a point 50 feet in front of a church, the angles of elevation to the base of the steeple and the top of the steeple are 30 degrees and 45 degrees, respectively. Find the height of the steeple.
**Example 3: Navigation** An airplane flying at 600 mph has a bearing of $52^\circ$. After flying for 1.5 hours, how far north and how far east will the plane have traveled from its point of departure?

**Example 4:** An observer in a lighthouse 350 feet above sea level observes two ships directly offshore. The angles of depression to the ships are $4^\circ$ and $6.5^\circ$. How far apart are the ships?