4. (10 pts.) Two observers, looking down from a tall building to a point $X$, measure angles of depression as shown. If one observer is 30 feet above the other, how far is the point $X$ from the base of the building?

\[ \frac{\sin 35^\circ}{x} = \frac{\sin 10^\circ}{30} \]

\[ x = \frac{30 \sin 35^\circ}{\sin 10^\circ} \approx 99.09 \text{ ft} \]

\[ y = x \cos 45^\circ = \]

\[ \frac{30 \sin 35^\circ}{\sin 10^\circ} \cos 45^\circ \approx 70.0 \text{ ft} \]