

36. Let the woman be at point A , the first landmark (at 62°) be at point B , and the other landmark be at point C . We want to find the length BC . Now, $\cos 62^\circ = \frac{1150}{AB} \Leftrightarrow AB = \frac{1150}{\cos 62^\circ} \approx 2450$.

Similarly, $\cos 54^\circ = \frac{1150}{AC} \Leftrightarrow AC = \frac{1150}{\cos 54^\circ} \approx 1956$. Therefore, by the Law of Cosines,

$$BC^2 = AB^2 + AC^2 - 2(AB)(AC) \cdot \cos 43^\circ \Rightarrow$$

$BC = \sqrt{2450^2 + 1956^2 - 2(2450)(1956) \cdot \cos 43^\circ} \Rightarrow BC \approx 1679$. Thus, the two landmarks are roughly 1679 feet apart.