

Task: Two points, A and B, lie on a horizontal plane directly east of a building 35 meters high. The angles of elevation to the points are 29 degree and 10 minutes and 43 degree and 50 minutes, respectively. Determine the distance between the two points.

Solution:

$$35 / \tan 43^{\circ}50' = \frac{35}{0.9601} \approx 36.4545(\text{meters}) \text{ distance to the point } B$$

$$35 / \tan 29^{\circ}10' = \frac{35}{0.5581} \approx 62.7128(\text{meters}) \text{ distance to the point } A$$

$62.7128 - 36.4545 = 26.2582$ (meters) distance between the two points

Answer: 26.2582 meters.