



a)

$$\vec{S} = \vec{A} + \vec{B} \quad S = \sqrt{A^2 + B^2 - 2AB \cos(90^\circ + 30^\circ)}$$

$$= \sqrt{50^2 + 25^2 - 2 * 25 * 50 \cos(90^\circ + 30^\circ)} = 66 \text{ km}$$

b)

$$B^2 = A^2 + S^2 - 2AS \cos \theta \quad \cos \theta = \frac{A^2 + S^2 - B^2}{2AS} = \frac{50^2 + 66^2 - 25^2}{2 * 50 * 66} = 0,944 \quad \rightarrow \theta = 20^\circ$$