

$$(5) \frac{\tan d}{1 + \sec d} - \frac{\tan d}{1 - \sec d} = \frac{2}{\sec d}$$

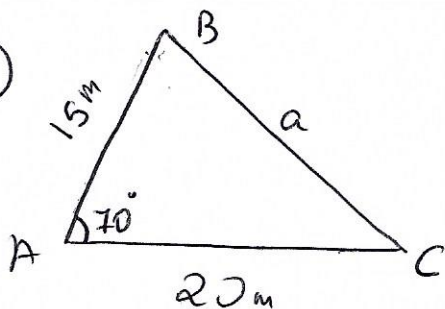
$$\frac{\frac{\sec d}{\cos d}}{1 + \frac{1}{\cos d}} - \frac{\frac{\sec d}{\cos d}}{1 - \frac{1}{\cos d}} = \frac{\frac{\sec d}{\cos d}}{\frac{\cos d + 1}{\cos d}} - \frac{\frac{\sec d}{\cos d}}{\frac{\cos d - 1}{\cos d}} = \frac{\cos d \sec d}{\cos d (\cos d + 1)} - \frac{\cos d \sec d}{\cos d (\cos d - 1)}$$

$$= \frac{\cos d \sec d (\cos d - 1) - \cos d \sec d (\cos d + 1)}{\cos d (\cos d + 1) (\cos d - 1)} = \frac{\cos d \sec d \cdot [(\cos d - 1) - (\cos d + 1)]}{\cos d (\cos^2 d - 1)}$$

$$= \frac{\cos d \sec d \cdot (-2)}{\cos d \cdot (-\sin^2 d)} = \frac{2}{\sec d}$$

$$\begin{aligned} \hookrightarrow \sec^2 d + \cos^2 d &= 1 \\ \cos^2 d - 1 &= -\sec^2 d \end{aligned}$$

(6)



Por el teorema del Coseno

$$a^2 = 15^2 + 20^2 - 2 \cdot 15 \cdot 20 \cdot \cos 70^\circ$$

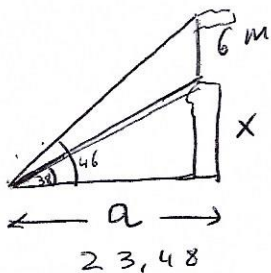
$$a^2 = 225 + 400 - 205,21$$

$$a = \sqrt{419,78} \quad a = 20,48$$

Necesitamos  $15 + 20 + 20,48 = 55,48 \text{ m}$ .

Precio  $55,48 \cdot 20 = 1109,7 \text{ €}$  No llegan 1000 €

(7)



$$\tan 38 = \frac{x}{a}$$

$$0,78 a = x$$

$$\tan 46 = \frac{6+x}{a}$$

$$1,04 = \frac{6+0,78a}{a}$$

$$1,04 a - 0,78 a = 6$$

$$0,25 a = 6$$

$$\boxed{a = 23,48 \text{ m}}$$

$$x = 0,78 \cdot 23,48$$

$$\boxed{x = 18,31 \text{ m}}$$