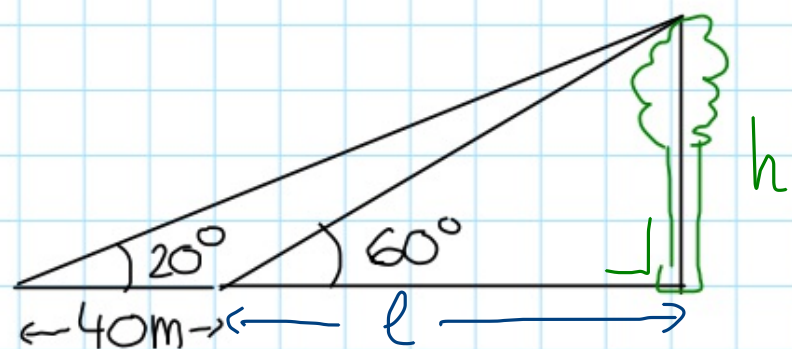


Ex 3.28



$$\begin{cases} \tan(60) = \frac{h}{l} & \Leftrightarrow h = l \cdot \underbrace{\tan(60)}_{\sim 1,732} \\ \tan(20) = \frac{h}{l+40} \end{cases}$$

on substitue

$$\Rightarrow \tan(20) = \frac{l \cdot \tan(60)}{l+40}$$

(1) dans (2)

$$(l+40) \tan(20) = l \cdot \tan(60)$$

$$l \cdot \tan(20) + 40 \cdot \tan(20) = l \cdot \tan(60)$$

$$l \cdot \tan(20) - l \cdot \tan(60) = -40 \cdot \tan(20)$$

$$l (\tan(20) - \tan(60)) = -40 \cdot \tan(20)$$

$$l = \frac{-40 \cdot \tan(20)}{\tan(20) - \tan(60)}$$

$$\cong 10,64$$

ou

$$0,364 \cong \frac{1,732l}{l+40} \quad | \cdot (l+40)$$

$$(l+40) 0,364 \cong 1,732l$$

$$0,364l + \underbrace{40 \cdot 0,364}_{\sim 14,559} \cong 1,732l$$

$$0,364l - 1,732l \cong -14,559$$

$$-1,368l \cong -14,559$$

$$l \cong \frac{-14,559}{-1,368}$$

$$\cong 10,64$$

$$\Rightarrow h = l \cdot \tan(60)$$

$$\cong 10,64 \cdot \tan(60) \cong 18,43$$

La rivière a une largeur de 10,64 m. environ et

l'arbre mesure environ 18,43 m.