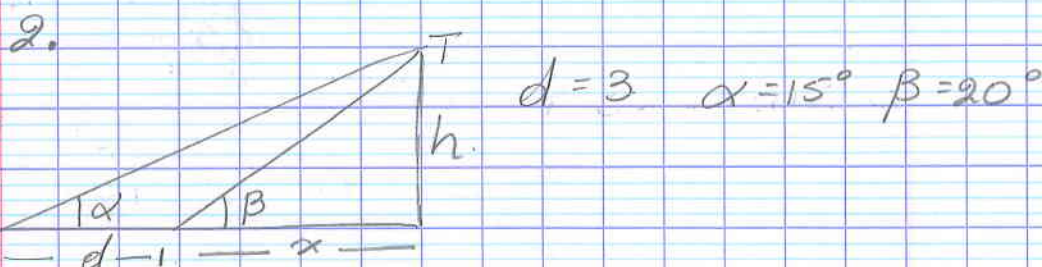
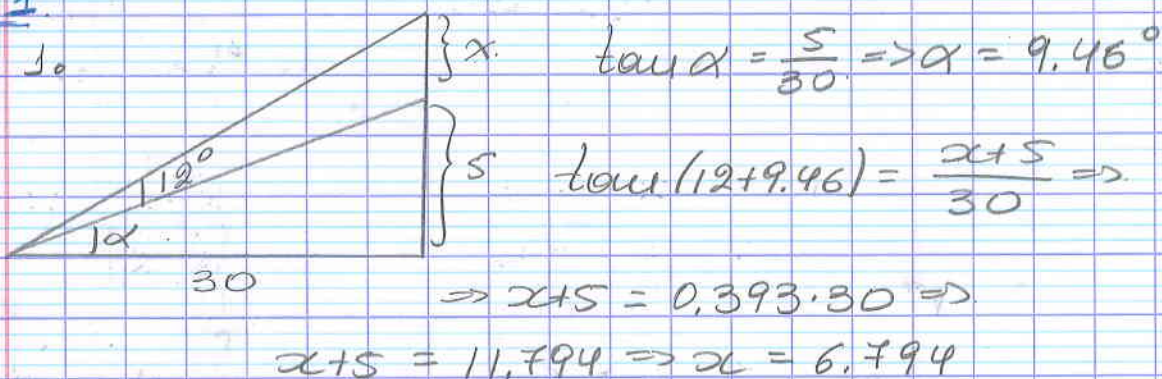


2DDR Niveau 1: Trigo.

Exercice 1



$$\left. \begin{aligned} \tan \beta &= \frac{h}{x} \Rightarrow h = x \cdot \tan 20 \\ \tan \alpha &= \frac{h}{d+x} \Rightarrow h = \tan 15 \cdot (3+x) \end{aligned} \right\} \Rightarrow$$

$$\begin{aligned} \Rightarrow x \cdot 0.364 &= 0.268(3+x) \Rightarrow \\ \Rightarrow 0.364x &= 0.804 + 0.268x \Rightarrow \\ \Rightarrow 0.096x &= 0.804 \Rightarrow x = 8.375 \end{aligned}$$

Exercice 2 $\tan \alpha = -\frac{3}{2} \quad \alpha \in Q_{IV}$

$$\tan \alpha = \frac{\sin \alpha}{\cos \alpha} = -\frac{3}{2} \Rightarrow \sin \alpha = -\frac{3}{2} \cos \alpha$$

$$\sin^2 \alpha + \cos^2 \alpha = 1 \Rightarrow \frac{9}{4} \cos^2 \alpha + \cos^2 \alpha = 1 \Leftrightarrow$$

$$\Leftrightarrow \frac{13}{4} \cos^2 \alpha = 1 \Rightarrow \cos^2 \alpha = \frac{4}{13} \Rightarrow \cos \alpha = \pm \frac{2}{\sqrt{13}}$$

$$\alpha \in Q_{IV} \Rightarrow \cos \alpha > 0 \Rightarrow \cos \alpha = \frac{2}{\sqrt{13}}$$

$$\sin \alpha = -\frac{3}{2} \cdot \frac{2}{\sqrt{13}} \Rightarrow \sin \alpha = -\frac{3}{\sqrt{13}} = -\frac{3\sqrt{13}}{13}$$