



$$\sin 45^\circ = \frac{AD}{AC}$$

$$\cos 45^\circ = \frac{DC}{AC}$$

$$\begin{aligned} AC &= \sqrt{AD^2 + DC^2} = \sqrt{AD^2 + AD^2} = \\ &= \sqrt{2 AD^2} = \sqrt{2} AD \end{aligned}$$

Alors : $\sin 45^\circ = \cos 45^\circ = \frac{AD}{\sqrt{2} AD} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$

$$\operatorname{tg} 45^\circ = \frac{AD}{DC} = 1 \quad \text{oussi} \quad \operatorname{tg} 45^\circ = \frac{\sin 45^\circ}{\cos 45^\circ} = 1$$