

Démontrer que $\text{tg } A = \frac{\sin A}{\cos A}$

Dans un triangle ABC rectangle en B, on a : $\text{tg } \widehat{A} = \frac{\widehat{\sin A}}{\widehat{\cos A}}$.

On sait que : $\text{tg } \widehat{A} = \frac{\text{Coteoppose}}{\text{Coteadjacent}} = \frac{BC}{AB}$.

$\cos \widehat{A} = \frac{\text{Coteadjacent}}{\text{Hypotenuse}} = \frac{AB}{AC}$

$\sin \widehat{A} = \frac{\text{Coteoppose}}{\text{Hypotenuse}} = \frac{BC}{AC}$

$\frac{\widehat{\sin A}}{\widehat{\cos A}} = \frac{BC \times AC}{AB \times AC} = \frac{BC}{AB} = \text{tg } \widehat{A}$