

## TRIGONOMÉTRIE

### DÉFINITIONS

1. $\tan x = \frac{\sin x}{\cos x}$	2. $\cotan x = \frac{\cos x}{\sin x}$
3. $\sec x = \frac{1}{\cos x}$	4. $\cosec x = \frac{1}{\sin x}$

### IDENTITÉS FONDAMENTALES

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| <ul style="list-style-type: none"> <li>• <math>\sin^2 x + \cos^2 x = 1</math></li> <li>• <math>1 + \tan^2 x = \sec^2 x</math></li> <li>• <math>1 + \cotan^2 x = \cosec^2 x</math></li> </ul> |
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### FORMULES DE L'OPPOSÉ

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| <ul style="list-style-type: none"> <li>• <math>\sin(-x) = -\sin x</math></li> <li>• <math>\cos(-x) = \cos x</math></li> <li>• <math>\tan(-x) = -\tan x</math></li> </ul> |
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### FORMULES DE L'ADDITION

$\sin(a + b) = \sin a \cos b + \sin b \cos a$	$\sin(a - b) = \sin a \cos b - \sin b \cos a$
$\cos(a + b) = \cos a \cos b - \sin a \sin b$	$\cos(a - b) = \cos a \cos b + \sin a \sin b$
$\tan(a+b) = \frac{\tan a + \tan b}{1 - \tan a \tan b}$	$\tan(a-b) = \frac{\tan a - \tan b}{1 + \tan a \tan b}$

### FORMULES DU DOUBLE

$\sin 2a = 2 \sin a \cos a$	
$\cos 2a = \cos^2 a - \sin^2 a$ $= 2 \cos^2 a - 1$ $= 1 - 2 \sin^2 a$	$\cos^2 a = \frac{1 + \cos 2a}{2}$ $\sin^2 a = \frac{1 - \cos 2a}{2}$
$\tan 2a = \frac{2 \tan a}{1 - \tan^2 a}$	

