

# Trigonométrie

## Question 1/35

$$\sin(x) + \sin(y)$$

## Réponse 1/35

$$2 \sin\left(\frac{x+y}{2}\right) \cos\left(\frac{x-y}{2}\right)$$

## Question 2/35

$$\sin\left(x + \frac{\pi}{2}\right)$$

## Réponse 2/35

$$\cos(x)$$

## Question 3/35

$$\tan(x + y)$$

## Réponse 3/35

$$\frac{\tan(x) + \tan(y)}{1 - \tan(x) \tan(y)}$$

## Question 4/35

$$\sin(2x)$$



## Réponse 4/35

$$2 \sin(x) \cos(x)$$

## Question 5/35

$$\frac{2 \tan(x)}{1 - \tan^2(x)}$$

## Réponse 5/35

$$\tan(2x)$$

## Question 6/35

$$\sin(x + \pi)$$

## Réponse 6/35

$$-\sin(x)$$

## Question 7/35

$$\frac{1 - t^2}{2t}$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Réponse 7/35

$$\cot(x)$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Question 8/35

$$\sin(x) \sin(y)$$



## Réponse 8/35

$$\frac{1}{2}(\cos(x - y) - \cos(x + y))$$

## Question 9/35

$$\frac{\cot(x) \cot(y) - 1}{\cot(x) + \cot(y)}$$

## Réponse 9/35

$$\cot(x + y)$$

## Question 10/35

$$\sin^2(x)$$

Réponse 10/35

$$\frac{1 - \cos(2x)}{2}$$

## Question 11/35

$$\frac{2t}{1+t^2}$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Réponse 11/35

$$\sin(x)$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Question 12/35

$$\cos(x) \cos(y) - \sin(x) \sin(y)$$



Réponse 12/35

$$\cos(x + y)$$

## Question 13/35

$$\cos(x) \sin(y)$$

## Réponse 13/35

$$\frac{1}{2}(\sin(x + y) - \sin(x - y))$$

## Question 14/35

$$\frac{-\cot(x)\cot(y)-1}{\cot(x)-\cot(y)} = \frac{\cot(x)\cot(y)+1}{\cot(y)-\cot(x)}$$

## Réponse 14/35

$$\cot(x - y)$$

## Question 15/35

$$\sin(x) \cos(y) + \sin(y) \cos(x)$$

Réponse 15/35

$$\sin(x + y)$$

## Question 16/35

$$\frac{1}{2}(\sin(x + y) + \sin(x - y))$$



## Réponse 16/35

$$\sin(x) \cos(y)$$

## Question 17/35

$$\cos(x) - \cos(y)$$

## Réponse 17/35

$$-2 \sin\left(\frac{x+y}{2}\right) \sin\left(\frac{x-y}{2}\right)$$

## Question 18/35

$$\frac{1}{2}(\cos(x+y) + \cos(x-y))$$

## Réponse 18/35

$$\cos(x) \cos(y)$$

## Question 19/35

Valeurs remarquables

## Réponse 19/35

	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$
sin	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1
cos	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
tan	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	—
cot	—	$\sqrt{3}$	1	$\frac{1}{\sqrt{3}}$	0

## Question 20/35

$$\cos\left(x + \frac{\pi}{2}\right)$$



## Réponse 20/35

$$-\sin(x)$$

## Question 21/35

$$2 \cos\left(\frac{x+y}{2}\right) \cos\left(\frac{x-y}{2}\right)$$

## Réponse 21/35

$$\cos(x) + \cos(y)$$

## Question 22/35

$$\frac{2t}{1-t^2}$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Réponse 22/35

$$\tan(x)$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Question 23/35

$$\cos(2x)$$

## Réponse 23/35

$$\cos^2(x) - \sin^2(x) = 2 \cos^2(x) - 1 = 1 - 2 \sin^2(x)$$

## Question 24/35

$$\cos(x + \pi)$$



## Réponse 24/35

$$-\cos(x)$$

## Question 25/35

$$\cos\left(\frac{\pi}{2} - x\right)$$

Réponse 25/35

$$\sin(x)$$

## Question 26/35

$$\frac{1 + \cos(2x)}{2}$$

## Réponse 26/35

$$\cos^2(x)$$

## Question 27/35

$$\sin(x - y)$$

## Réponse 27/35

$$\sin(x) \cos(y) - \sin(y) \cos(x)$$

## Question 28/35

$$\frac{\cot^2(x) - 1}{2 \cot(x)}$$



## Réponse 28/35

$$\cot(2x)$$

## Question 29/35

$$\frac{\tan(x) - \tan(y)}{1 + \tan(x) \tan(y)}$$

## Réponse 29/35

$$\tan(x - y)$$

## Question 30/35

$$\cos(x)$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Réponse 30/35

$$\frac{1 - t^2}{1 + t^2}$$

$$t = \tan\left(\frac{x}{2}\right)$$

## Question 31/35

$$\cos(x) \cos(y) + \sin(x) \sin(y)$$

Réponse 31/35

$$\cos(x - y)$$

## Question 32/35

$$2 \cos\left(\frac{x+y}{2}\right) \sin\left(\frac{x-y}{2}\right)$$



Réponse 32/35

$$\sin(x) - \sin(y)$$

## Question 33/35

$$\sin\left(\frac{\pi}{2} - x\right)$$

Réponse 33/35

$$\cos(x)$$

## Question 34/35

$$\cos(\pi - x)$$

Réponse 34/35

$$-\cos(x)$$

## Question 35/35

$$\sin(\pi - x)$$

Réponse 35/35

$$\sin(x)$$