# Trigonométrie

## Question 1/35

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

## Réponse 1/35

 $\cos(x)$ 

## Question 2/35

$$\cos^2(x)$$

# Réponse 2/35

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

# Question 3/35

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

# Réponse 3/35

$$\frac{1 - t^2}{2t}$$
$$t = \tan\left(\frac{x}{2}\right)$$

## Question 4/35

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

## Réponse 4/35

$$-\cos(x)$$

## Question 5/35

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

#### Réponse 5/35

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

## Question 6/35

$$\sin(x-y)$$

## Réponse 6/35

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

# Question 7/35

$$\tan(x+y)$$

# Réponse 7/35

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

## Question 8/35

$$\sin(x+y)$$

## Réponse 8/35

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

# Question 9/35

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

## Réponse 9/35

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

# Question 10/35

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

## Réponse 10/35

$$\cot(2x)$$

## Question 11/35

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

#### Réponse 11/35

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

# Question 12/35

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

#### Réponse 12/35

 $\sin(x)$ 

## Question 13/35

Valeurs remarquables

## Réponse 13/35

	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 14/35

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

## Réponse 14/35

$$\cot(x+y)$$

## Question 15/35

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

## Réponse 15/35

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

#### Question 16/35

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

#### Réponse 16/35

 $\cos(2x)$ 

# Question 17/35

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

 $\cos(x)$ 

## Réponse 17/35

$$\frac{1 - t^2}{1 + t^2}$$
$$t = \tan\left(\frac{x}{2}\right)$$

# Question 18/35

 $\sin(2x)$ 

### Réponse 18/35

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

## Question 19/35

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

#### Réponse 19/35

$$\sin(x)$$

# Question 20/35

$$\frac{2t}{1+t^2}$$
$$t = \tan\left(\frac{x}{2}\right)$$

## Réponse 20/35

$$\sin(x)$$

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

# Question 21/35

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

## Réponse 21/35

$$\frac{2t}{1-t^2}$$
$$t = \tan\left(\frac{x}{2}\right)$$

# Question 22/35

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

### Réponse 22/35

$$\cos(x)$$

# Question 23/35

 $\tan(2x)$ 

## Réponse 23/35

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

## Question 24/35

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

### Réponse 24/35

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

### Question 25/35

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

### Réponse 25/35

$$\cos(x+y)$$

# Question 26/35

$$\tan(x-y)$$

## Réponse 26/35

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

# Question 27/35

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

### Réponse 27/35

$$\sin^2(x)$$

## Question 28/35

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

#### Réponse 28/35

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

## Question 29/35

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

### Réponse 29/35

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

## Question 30/35

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

### Réponse 30/35

$$-\cos(x)$$

# Question 31/35

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

#### Réponse 31/35

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

## Question 32/35

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

### Réponse 32/35

$$-\sin(x)$$

## Question 33/35

$$\cot(x-y)$$

### Réponse 33/35

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

# Question 34/35

$$\cos(x-y)$$

#### Réponse 34/35

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

## Question 35/35

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

### Réponse 35/35

$$-\sin(x)$$