

# Trigonometriske identiteter

## Grunnleggende identiteter

$$\cos^2 x + \sin^2 x = 1$$

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

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

## Noen nyttige konsekvenser

$$\sin 2x = 2 \sin x \cos x$$

$$\cos 2x = \cos^2 x - \sin^2 x$$

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

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

For alle heltall  $n, m$ :

$$\sin mx \sin nx = \frac{1}{2}[\cos(m - n)x - \cos(m + n)x]$$

$$\sin mx \cos nx = \frac{1}{2}[\sin(m - n)x + \sin(m + n)x]$$

$$\cos mx \cos nx = \frac{1}{2}[\cos(m - n)x + \cos(m + n)x]$$