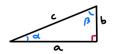
## Funzioni Trigonometriche

## Definizione

Dato un triangolo rettangolo come in figura, allora:



• 
$$sin(\alpha) = \frac{b}{c}$$

• 
$$cos(\alpha) = \frac{a}{c}$$

• 
$$sin(\alpha) = \frac{b}{c}$$
  $sin(\beta) = \frac{a}{c}$   
•  $cos(\alpha) = \frac{a}{c}$   $cos(\beta) = \frac{b}{c}$   
•  $tan(\alpha) = \frac{sin(\alpha)}{cos(\alpha)} = \frac{b}{a}$   $tan(\beta) = \frac{sin(\beta)}{cos(\beta)} = \frac{a}{b}$ 

$$sin(\beta) = \frac{a}{c}$$

$$cos(\beta) = \frac{b}{c}$$

$$tan(\beta) = \frac{sin(\beta)}{cos(\beta)} = \frac{a}{b}$$

## Proprietà

• 
$$-1 \le \sin(x) \le 1$$
  $-1 \le \cos(x) \le 1$ 

$$-1 \le \cos(x) \le 1$$

$$\bullet \ \sin(90^{\circ} - x) = \cos(x)$$

$$\bullet \ \cos(90^{\circ} - x) = \sin(x)$$

$$\bullet \sin^2(x) + \cos^2(x) = 1$$