

# Trigonometry Reference Sheet

## Identities

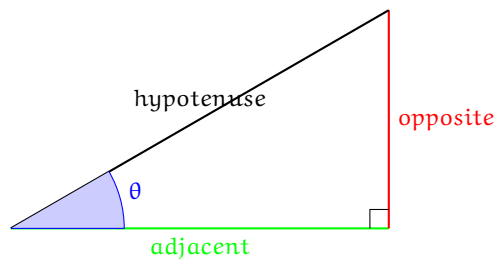
### Remembering the Value Table

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$$\begin{aligned}
 a^n a^m &= a^{n+m} & \frac{a^n}{a^m} &= a^{n-m} & (a^n)^m &= a^{n \cdot m} \\
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 \end{aligned}$$

### 1 The Real Equations

The only real equations of the six you are used to seeing are the ones you need to worry about, they are sin and cos.



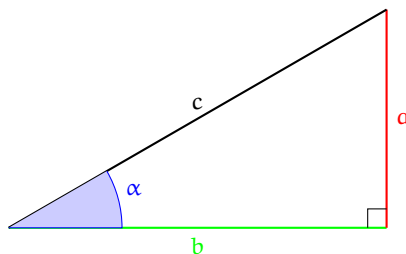
$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}} \quad \cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

### 2 The Other Basic Equations

These are all simply short hand for the above sin and cos

$$\begin{aligned}
 \tan \theta &= \frac{\text{opposite}}{\text{adjacent}} & \cot \theta &= \frac{\text{adjacent}}{\text{opposite}} \\
 \sec \theta &= \frac{\text{hypotenuse}}{\text{adjacent}} & \csc \theta &= \frac{\text{hypotenuse}}{\text{opposite}}
 \end{aligned}$$

### 3 Trigonometry

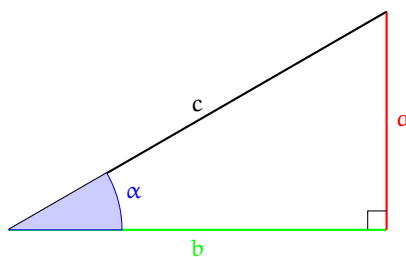


$$\begin{aligned}
 \sin \alpha &= \frac{a}{c} & \cos \alpha &= \frac{b}{c} \\
 \tan \alpha &= \frac{a}{b} & \cot \alpha &= \frac{b}{a}
 \end{aligned}$$

### 4 Algebra

$$\begin{aligned}
 a^n a^m &= a^{n+m} & \frac{a^n}{a^m} &= a^{n-m} & (a^n)^m &= a^{n \cdot m} \\
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 \end{aligned}$$

### 5 Trigonometry



$$\begin{aligned}
 \sin \alpha &= \frac{a}{c} & \cos \alpha &= \frac{b}{c} \\
 \tan \alpha &= \frac{a}{b} & \cot \alpha &= \frac{b}{a}
 \end{aligned}$$

### 6 The End

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