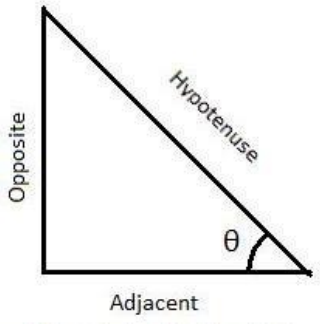
# KC Notes **Mathematics**

## Year 8 Trigonometry

### Introduction

- Hypotenuse: the side opposite the right angle
- Opposite: the side opposite the angle accessed
- Adjacent: the side adjacent to the angle accessed.




### The Ratios

$$\sin\theta = \frac{opp}{hyp}$$

$$\cos\theta = \frac{adj}{hyp}$$

$$\tan\theta = \frac{opp}{adj}$$

### Fractions of a degree

° = Degrees

1°= 60’

’ = Minutes

1’ = 60”

”= Seconds

### Finding an angle

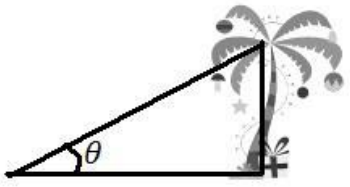
$$\sin\theta = \frac{opp}{hyp}$$

$$\theta = \sin^{-1}\frac{opp}{hyp}$$

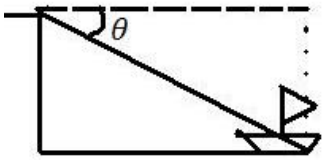
“Inverse Sine” detaches the ‘sine’ from the angle.

### Elevation and Depression

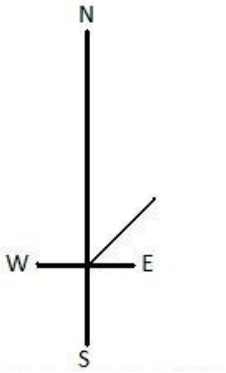
Elevation is **going up**:




Depression is **going down**:




### Compass Rose




Start from North clockwise, and measure the angle formed. For example, the above is 45°.