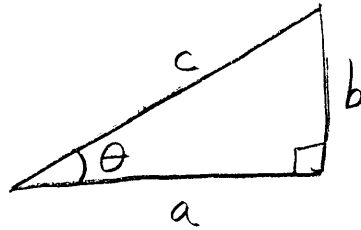


# Right Triangle Trigonometry

$$a^2 + b^2 = c^2$$



$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{b}{c}$$

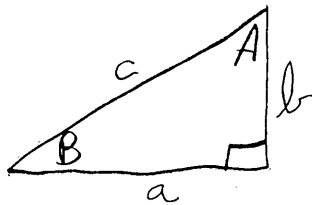
$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}} = \frac{a}{c}$$

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}} = \frac{b}{a}$$

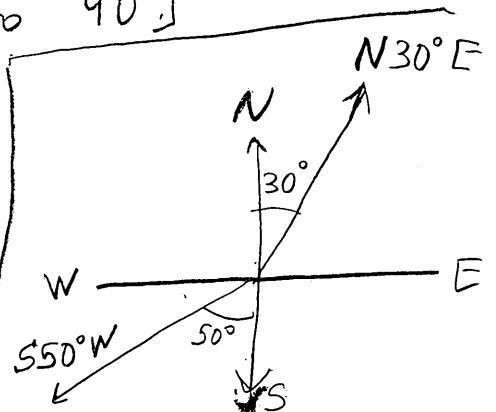
Complementary Angle Theorem: Cofunctions of complementary angles are equal.

- [ Sine and Cosine are cofunctions of each other. ]
- [ Tangent and Cotangent " " " " " ]
- [ Secant and Cosecant " " " " " ]

[ Complementary angles add up to 90° ]



$$\begin{aligned} \sin B &= \cos A \\ \cos B &= \sin A \\ \tan B &= \cot A \\ \sec B &= \csc A \end{aligned}$$



Direction or Bearing is the angle between the ray and the north-south line. N or S is always written first.