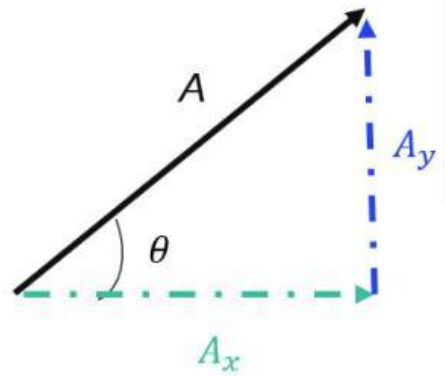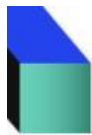$$\cos\theta = \frac{adjacent\ side}{hypotenuse} = \frac{A_x}{A}$$

$$\sin\theta = \frac{opposite\ side}{hypotenuse} = \frac{A_y}{A}$$

$$\tan\theta = \frac{opposite\ side}{adjacent\ side} = \frac{A_y}{A_x}$$
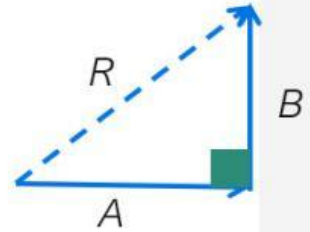
Adding vectors (with angles)

1 Vectors with 90 angle

For perpendicular vectors, We use Pythagorean theorem.
A and B are perpendicular vectors, the resultant vector is

$$R^2 = A^2 + B^2$$

2 Vectors with angle other than 90

We use the law of sines or the law of consines

Law of sines $$\frac{R}{\sin\ \theta} = \frac{A}{\sin\ a} = \frac{B}{\sin\ b}$$

Law of cosines $$R^2 = A^2 + B^2 - 2AB \cos\ \theta$$