$$\vec{A} \cdot \vec{B} > 0 \qquad \theta \text{ is acute.}$$

$$\vec{A} \cdot \vec{B} < 0 \qquad \theta \text{ is obtuse.}$$

$$\vec{A} \cdot \vec{B} = 0 \qquad \text{Vectors are orthogonal.}$$

$$\vec{A} \times \vec{B} = 0 \qquad \text{Vectors are parallel.}$$