Vector Formula:

1) For perpendicular: $A.B = 0$

2) For parallel: $A \times B = 0$

3) The component of the vector B along $A = \dfrac{A.B}{|A|} \hat{A}$

The component of the vector A along $B = \dfrac{A.B}{|B|} \hat{B}$

4) Angle: $A.B = |A| \, |B| \cos \theta$

$\therefore \theta = \cos^{-1} \left(\dfrac{A.B}{|A| \, |B|} \right)$

5) Coplanar: When three vectors are in a plane, then $(A \times B).C = 0$

6) Unit vector which is perpendicular to two vectors $= \dfrac{A \times B}{|A \times B|}$