1.Explain Dot product and Cross product of two vector with example.

* Dot product:
* A dot product is the product of the magnitude of the vectors and the cos of the angle between them.
* The dot product of two vectors A and B is represented as : Α.Β = ΑΒ cos θ.
* The resultant of the dot product of the vectors is a scalar quantity.
* The dot product is zero when the vectors are orthogonal ( θ = 90°).
* The dot product of two vectors follows the commutative law : A. B = B. A.
* Cross product:
* A cross product is the product of the magnitude of the vectors and the sine of the angle that they subtend on each other.
* The cross product of two vectors A and B is represented as : Α × Β = ΑΒ sin θ.
* The resultant of the cross product of the vectors is a vector quantity.
* The cross product is maximum when the vectors are orthogonal ( θ = 90°).
* The cross product of two vectors does not follow the commutative law : A × B ≠ B × A.