

Ex 1-12

$$\vec{A} = A_x \hat{i} + A_y \hat{j} + A_z \hat{k}$$

$$\vec{B} = B_x \hat{i} + B_y \hat{j} + B_z \hat{k}$$

$$\vec{C} = \vec{A} \times \vec{B} = (A_y B_z - A_z B_y) \hat{i}$$

$$+ (A_z B_x - A_x B_z) \hat{j}$$

$$+ (A_x B_y - A_y B_x) \hat{k}$$

$$A_y = A_z = B_z = 0$$

$$\vec{A} \times \vec{B} = A_x B_y \hat{k}$$

$$A_x = 6$$

$$B_y = 4 \sin 30^\circ = 2$$

$$\vec{C} = \vec{A} \times \vec{B} = (6)(2) \hat{k}$$

$$\vec{C} = 12 \hat{k}$$



