

29. We apply Eq. 3-20 and Eq. 3-27.

(a) The scalar (dot) product of the two vectors is  $\vec{a} \cdot \vec{b} = ab \cos \phi = (10)(6.0) \cos 60^\circ = 30$ .

(b) The magnitude of the vector (cross) product of the two vectors is  $|\vec{a} \times \vec{b}| = ab \sin \phi = (10)(6.0) \sin 60^\circ = 52$ .