

# 10 False, for example,  $\mathbf{i} \cdot \mathbf{j} = \mathbf{i} \cdot \mathbf{k} = 0$

#16  $65^\circ, 107^\circ, 149^\circ$

#22  $71^\circ$

#26

a)  $\langle -1, -1 \rangle + \langle 3, -3 \rangle$

b)  $\langle 16/5, 0, -8/5 \rangle + \langle -1/5, 1, -2/5 \rangle$

c)  $-2\vec{b} + \vec{0}$

#33  $(34)(9.8) \tan 27^\circ = 169.77 \text{ N}$

#36  $25,000 \sqrt{2} \text{ J}$