

$$\vec{v} \cdot \vec{w} = (v_1 \times w_1) + (v_2 \times w_2) + (v_3 \times w_3) + (v_4 \times w_4) + (v_5 \times w_5)$$

$$\vec{v} \cdot \vec{w} = (1 \times 6) + (2 \times 5) + (3 \times 4) + (4 \times 3) + (5 \times 2)$$

$$\vec{v} \cdot \vec{w} = 6 + 10 + 12 + 12 + 10$$

$$\vec{v} \cdot \vec{w} = 50$$