



Figure 4.10: The magnitude of a scalar product $|\mathbf{v} \cdot \mathbf{w}| = |\mathbf{v}||\mathbf{w}| \cos \theta$. The magnitude can also be written $|\mathbf{v} \cdot \mathbf{w}| = v_w |\mathbf{w}| = |\mathbf{v}| w_v$ where $w_v = |\mathbf{w}| \cos \theta$ and $v_w = |\mathbf{v}| \cos \theta$ are shown as gray bars.