

Warmup #5: Dot Product

1. Find the dot product of $u = \langle 2, -2 \rangle$ and $v = \langle -3, 3 \rangle$.

2. Are the two vectors orthogonal?

$$u = -3i + 5j \text{ and } v = -5i - 3j$$

3. Find the dot product if $\|\vec{a}\| = 3$, $\|\vec{b}\| = 4$, and $\theta = 53^\circ$.
(Round to the nearest hundredth.)