

Instructions: Show all work. Use exact answers unless otherwise asked to round.

1. Use $\vec{u} = \langle 2, -3, 1 \rangle$, $\vec{v} = \langle 1, 4, -5 \rangle$ to find the following.

a. Find $\vec{u} \cdot \vec{v}$

b. Find the angle between \vec{u} and \vec{v}

c. Find $\vec{u} \times \vec{v}$

2. Use $\vec{u} = \langle 5, 1 \rangle$, $\vec{v} = \langle 1, -3 \rangle$ to find the following.

a. Find $\vec{u} \cdot \vec{v}$

b. Find the angle between \vec{u} and \vec{v}