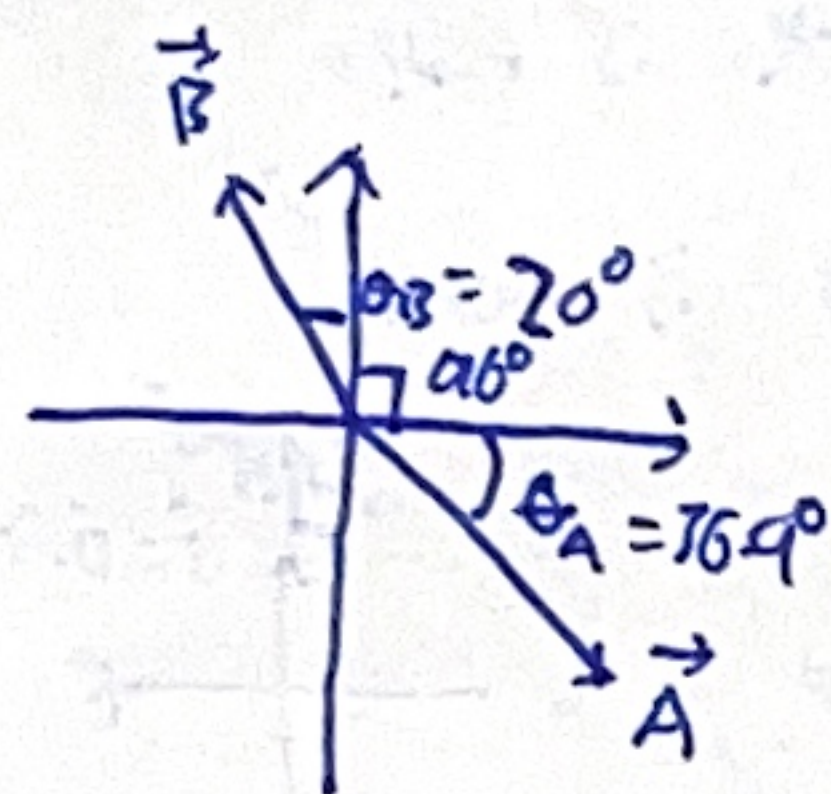


VP1.10.1



$$|\vec{A}| = 5.00 \quad |\vec{B}| = 6.40$$

$$A_x = (5.00) \cos(-36.9^\circ) = 3.998$$

$$A_y = (5.00) \sin(-36.9^\circ) = -3.002$$

$$B_x = (6.40) \cos(110^\circ) = -2.189$$

$$B_y = (6.40) \sin(110^\circ) = 6.014$$

(By computer)

$$\vec{A} \cdot \vec{B} = A_x B_x + A_y B_y + A_z B_z$$

$$= \cancel{(-3.998)(-3.002)} + \cancel{(-2.189)(6.014)} + (0)(0)$$

$$= (3.998)(-2.189) + (-3.002)(6.014) + 0$$

$$= -26.81$$

(By magnitude)

$$\vec{A} \cdot \vec{B} = |\vec{A}| |\vec{B}| \cos(\theta_{AB})$$

$$= (5.00)(6.40) \cos(-180^\circ - 146^\circ)$$

$$= -26.806$$

$$\hat{=} -26.81$$

N.B. Analytic Trigo needs more work.
Need to base on:

1. Unit Circle Method
2. Quadrants and Signs
3. Reference Angles.