$$\theta = \arccos(\frac{\vec{v} \cdot \vec{w}}{||\vec{v}|| \times ||\vec{w}||})$$

$$\theta = \arccos(\frac{(v_1 \times w_1) + (v_2 \times w_2) + (v_3 \times w_3) + (v_4 \times w_4)}{\sqrt{{v_1}^2 + {v_2}^2 + {v_3}^2 + {v_4}^2} \times \sqrt{{w_1}^2 + {w_2}^2 + {w_3}^2 + {w_4}^2}})$$

$$\theta = \arccos(\frac{(1 \times 5) + (2 \times 4) + (3 \times 3) + (4 \times 2)}{\sqrt{1^2 + 2^2 + 3^2 + 4^2} \times \sqrt{5^2 + 4^2 + 3^2 + 2^2}})$$

$$\theta = \arccos(\frac{5 + 8 + 9 + 8}{\sqrt{1 + 4 + 9 + 16} \times \sqrt{25 + 16 + 9 + 4}})$$

$$\theta = \arccos(\frac{30}{\sqrt{30} \times \sqrt{54}})$$

$$\theta = \arccos(\frac{30}{\sqrt{1620}})$$

$$\theta = \arccos(\frac{30}{40.24922359499622})$$

$$\theta = \arccos(0.7453559924999299)$$

$$\theta = 41.81°$$