$$\vec{a} \cdot \vec{\beta} = |\vec{a}| \cdot |\vec{\beta}| \cdot \operatorname{sun}(\widehat{\vec{a}, \vec{\beta}}) = 3 \cdot 4 \cdot \operatorname{sun}60^{\circ} = 12 \cdot \frac{1}{2} = 6$$