

**Exercise 1** Let  $\vec{v} = \langle 3, 7 \rangle$ . Find the unit vector  $\hat{u}$  in the direction of  $\vec{v}$ .

$$\hat{u} = \left\langle \frac{3}{\sqrt{58}}, \frac{7}{\sqrt{58}} \right\rangle$$

---