

Answer on Question #76907 – Math – Geometry

Question

Find the component form of the unit vector in the direction of $u = \langle 3, 4 \rangle$.

Solution

The unit vector in the direction of u :

$$\hat{u} = \frac{u}{|u|} = \frac{3\vec{i} + 4\vec{j}}{\sqrt{3^2 + 4^2}} = \frac{3}{5}\vec{i} + \frac{4}{5}\vec{j}, \quad \hat{u} = \langle 0.6, 0.8 \rangle$$

Answer: $\hat{u} = \langle 0.6, 0.8 \rangle$.