MAC 2313 Quiz 1
Tuesday January 16th

Find a unit vector in the same direction as the vector $\langle 4, 1, 8 \rangle$.

If $\vec{v} = \langle 4, 1, 8 \rangle$

then $|\vec{v}| = \sqrt{4^2 + 1^2 + 8^2} = \sqrt{16 + 1 + 64}$

$= \sqrt{81} = 9$

So, a <u>unit</u> vector in the same direction as $\vec{v}$

is $\frac{1}{|\vec{v}|} \vec{v} = \frac{1}{9} \langle 4, 1, 8 \rangle$ or $\langle \frac{4}{9}, \frac{1}{9}, \frac{8}{9} \rangle$