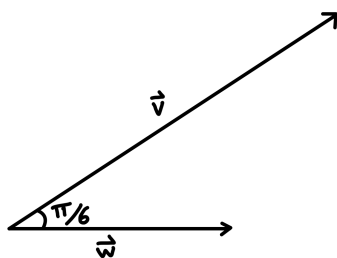Name: _____

Quiz 7

Math 112

You have 20 minutes to complete this quiz and upload your work to Canvas. Write your answers on a separate sheet of paper and scan them with a scanning app. When you're finished, first check your work if there is time remaining, then turn it in. You may use a scientific calculator, but not a graphing one, and you may not consult other people or the internet. **Show all your work.**

1. (4 points) Draw the vector $\vec{v} + \vec{w}$ in the figure below.

2. (8 points) Given that $\|\vec{v}\| = 5$ and $\|\vec{w}\| = 3$ in the previous figure, find the exact value of $\|\vec{v} + \vec{w}\|$.

3. (8 points) Let $\vec{v} = \vec{i} - \vec{j}$ and let $\vec{w}$ be a vector with magnitude 2 and angle $\dfrac{\pi}{4}$ from the horizontal. Find $\vec{v} \bullet \vec{w}$.