

SHOW ALL WORK!!! Unsupported answers might not receive full credit. Furthermore, please give me EXACT answers, not decimals. You have 10 minutes to complete this quiz.

Problem 1 [4 pts] Consider the triangle $\triangle ABC$ with sides $a = 501$, $b = 202$, and $c = 400$. Find the measure of the largest angle, rounding to the nearest degree.

Problem 2 [4 pts] Use De Moivre's Theorem to evaluate $[4(\cos \frac{4\pi}{3} + i \sin \frac{4\pi}{3})]^3$. Do not leave your answer in polar form; write it in $a + bi$ form.

Problem 3 [2 pts] Given that $\mathbf{v} = -3\mathbf{i} + 4\mathbf{j}$ and $\mathbf{w} = 7\mathbf{i} + 2\mathbf{j}$, find the component form of $-2\mathbf{v} + 3\mathbf{w}$.