

Name _____ raw scaled percent

Math 11 Trimester 1 Quiz 3 (20 Points)
Vector basics

■ Use of a calculator is allowed, but unnecessary.

[1] Show that the vectors $\langle -5, \sqrt{3} \rangle$ and $\langle \sqrt{27}, 15 \rangle$ are orthogonal.

[2] Find the angle between \vec{a} and \vec{b} if $\vec{a} = -\vec{i} + 3\vec{j}$ and $\vec{b} = 2\vec{i} - 6\vec{j}$.

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[3] For what numbers c are $\langle c, 6 \rangle$ and $\langle c, -4 \rangle$ orthogonal?

[4] In the article "What is Problem Solving?" by Richard Rusczyk, what advice does the author give concerning how to learn mathematics? (Answer with no more than one or two very brief sentences, please.)