

Quiz 1
21 May 2024

Answer the questions in the spaces provided. **Show all of your work and circle the answer you would like to have graded for each question.**

Name: _____

1. How do you know that $\vec{u} = \langle -2, 2, 4 \rangle$ and $\vec{v} = \langle 10, -10, -20 \rangle$ are parallel?

2. Give a **unit** vector orthogonal to both $\vec{u} = \langle 1, 2, 3 \rangle$ and $\vec{v} = \langle -3, 2, 4 \rangle$.

3. What is the center and radius of the sphere given by $x^2 + y^2 + z^2 = -2x + 4y + 4$.