

Quiz 8

Fill in the Blanks.

1. Given the two points $P(3, -1, 2)$ and $Q(2, 7, 1)$, then the vector $\overrightarrow{QP} =$ _____.
2. Given the vector $\vec{v} = \langle -1, 2, 3 \rangle$, then $2\vec{v} =$ _____.
3. Given the vectors $\vec{a} = \langle -3, 2, 6 \rangle$, $\vec{b} = \langle 3, -1, -5 \rangle$, then $\vec{a} + \vec{b} =$ _____.
4. Given the vectors $\vec{u} = \langle 1, 1, -1 \rangle$ and $\vec{v} = \langle -1, 1, 1 \rangle$, then $|\vec{u}| =$ _____, $|\vec{v}| =$ _____, $\vec{u} \cdot \vec{v} =$ _____, the angle between \vec{u} and \vec{v} is _____.
5. If the vector \vec{a} is orthogonal to the vector \vec{b} , then $\vec{a} \cdot \vec{b} =$ _____.
6. Given the vector $\vec{u} = \langle -1, 0, 1 \rangle$. Find the vector which has unit length and the same direction as \vec{u} . _____.
7. Given the vector $\vec{u} = \langle -1, 0, 1 \rangle$. Find the vector which has the opposite direction as \vec{u} with magnitude 2. _____.