

Last Name: _____

First Name: _____

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Quiz 8 (A)

Question 1. (3 marks) Write the vector $\vec{u} = (1, 2, 4)$ as a sum of two vectors, one that is parallel to $\vec{v} = (0, 4, 3)$ and one that is perpendicular to \vec{v} .

Question 2. (3 marks) Given $\vec{p} = (5, k)$, and $\vec{v} = (3, 7)$. Find k such that

- (a) \vec{p} and \vec{q} are parallel
- (b) \vec{p} and \vec{q} are orthogonal

Question 3. (4 marks) Find the volume of the parallelepiped determined by the vectors $\vec{u} = (2, -1, -3)$, and $\vec{v} = (4, 1, -3)$ and $\vec{w} = (2, -1, 4)$.