QUIZ 4 - MATH 251

YOUR NAME:_____

Friday, February 16

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Find the projection vector of $\mathbf{u} = \langle -1, 2, 0 \rangle$ along $\mathbf{v} = \langle 2, 0, 1 \rangle$.

2. Calculate the area of the parallelepiped spanned by the vectors $\mathbf{u} = \langle 2, 2, 1 \rangle$, $\mathbf{v} = \langle 1, 0, 3 \rangle$ and $\mathbf{w} = \langle 0, -4, 0 \rangle$.

3. Find for which values of the constant c, the vectors $\langle c^2, -2, 7 \rangle$ and $\langle 4, c, 0 \rangle$ are orthogonal.