

Name: _____

Math 233: Multivariate Calculus (Sect 13)

Instructor: Jennifer Li

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Quiz 2

Please write neatly and show all of your work.

1. Find the volume of the parallelepiped determined by vectors

$$\mathbf{a} = \langle 1, 2, 3 \rangle \text{ and } \mathbf{b} = \langle -1, 1, 2 \rangle \text{ and } \mathbf{c} = \langle 2, 1, 4 \rangle$$

2. Let $P_0(1, -5, 6)$ be a point and $\mathbf{v} = \langle -1, 2, -3 \rangle$ be a vector.

- (a) Find symmetric equations for the line L which passes through P_0 and is parallel to \mathbf{v} .

- (b) Where does the line L intersect the xz -plane?