Full name:	GT ID:	Sec:

Quiz 1 Version C

You have 15 minutes to take the quiz. No phones, notes, or use aids of any kind is permitted.

1. (2 points) Choose whether the following statement is true or false. [A]

The set of solutions in \mathbb{R}^3 to the pair of equations y = -2 and z = 2 is a plane in \mathbb{R}^3 which is perpendicular to the *x*-axis.

- \bigcirc TRUE \bigcirc FALSE
- 2. (8 points) [Lines and Planes]

Show that the planes P1 and P2 intersect by showing that P(2, 2, 4) lies on both planes. Find the normal vectors \mathbf{n}_1 and \mathbf{n}_2 for each plane. Then, use the formula $\mathbf{v} = \mathbf{n}_1 \times \mathbf{n}_2$ to find the line of intersection of the planes. [AJN]

$$P_1: \quad x - 2y + 2z = 6 P_2: \quad 3x - 2y + 2z = 10$$