

MATH 335 Quiz 1

Name: _____

Show all work. 10 points each.

1. Solve the following system of equations. Is the solution unique?

$$\begin{aligned}x_1 - 3x_3 &= 8 \\2x_1 + 2x_2 + 9x_3 &= 7 \\2x_2 + 5x_3 &= -2\end{aligned}$$

2. Let $A = \begin{bmatrix} 3 & -6 & 6 \\ -2 & 4 & -2 \end{bmatrix}$. Describe all solutions of $A\mathbf{x} = \mathbf{0}$ in parametric vector form. What geometric shape is the solution set and is it in \mathbb{R}^2 or \mathbb{R}^3 ?