Quiz 1: Linear systems

Tuesday, 6th October, 2026

Name: _____

Exercise 1. (3+7 = 10 Points) Consider the linear system

$$\begin{cases} x_1 + x_2 + x_3 = 5 \\ 2x_1 + 3x_2 = 8 \\ x_1 + 2x_2 - x_3 = 3 \end{cases}$$

(i) (3 Points) Which of the following are solutions of this linear system?

(a) $x_1 = 1$, $x_2 = 2$, $x_3 = 2$ (b) $x_1 = 3$, $x_2 = 1$, $x_3 = 1$

(ii) (7 Points) Find all solutions of this linear system.