Linear Algebra 1.1 Homework

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3. Not linear

5. Not linear

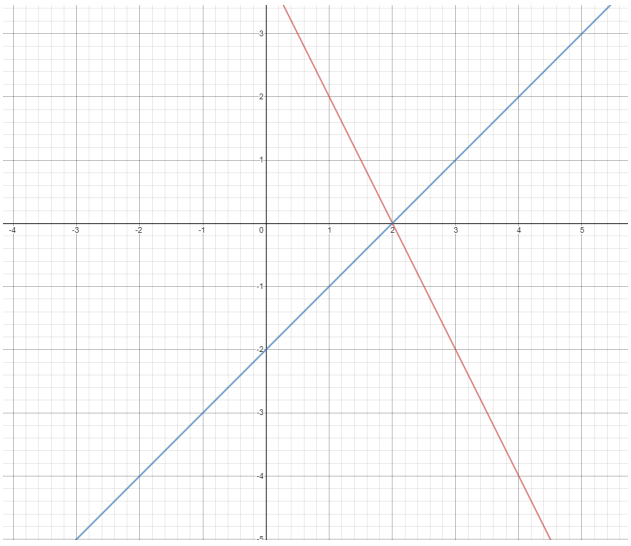
9.

$$y \to s$$
$$z \to t$$
$$S = \{(1 - s - t, s, t)\}$$

10.

$$x_2 \to s$$
$$x_3 \to t$$
$$S = \{(1 - 2s + 3t, s, t)\}$$

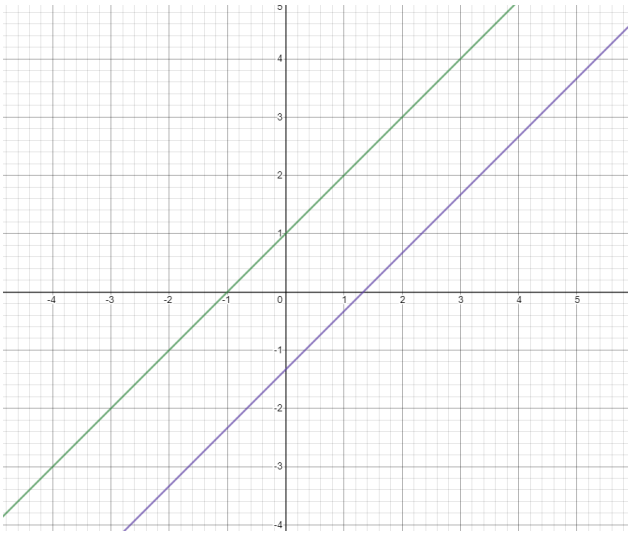
11.



$$\begin{aligned} 2x + y &= 4 \quad L_1 \\ x - y &= 2 \quad L_2 \\ L_1 - L_2 &\to x = 2 \\ 2(2) + y &= 4 \\ y &= 0 \end{aligned}$$

The solution is at point $(2, 0)$

13.



$$-x + y = 1 \quad L_1$$
$$3x - 3y = 4 \quad L_2$$
$$-\frac{1}{3}L_2 \to -x + y = -\frac{4}{3}$$

No Solution, Lines Parallel

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