

Problem 1. The decimal expansion of $\frac{2}{3}$ is $\frac{2}{3} = 0.66\overline{6}$. Consider the equation $\frac{2}{3} - x = \frac{5}{12}$.

- (a) Solve for x .
- (b) Find the decimal expansion of x .
- (c) Use the equation to find the decimal expansion of $\frac{5}{12}$.

Problem 2. Consider the line given by the equation $4x - 3y = 12$.

- (a) Find the x and y intercepts of the line.
- (b) Sketch the graph of the line.

Problem 3 (Extra Credit). Let E be the set of even numbers between 1 and 13 and let T be the set of multiples of 3 between 1 and 13. Find $(E \cup T) \setminus (E \cap T)$.