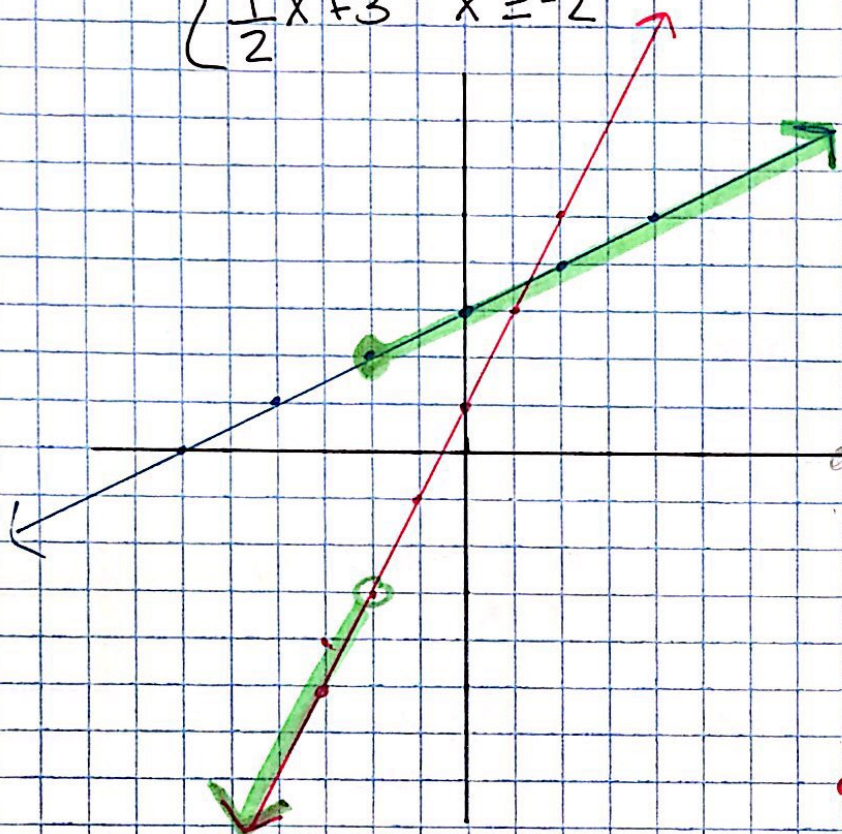


4.1 Functions

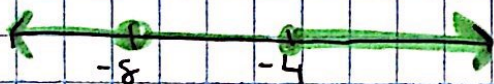
Piecewise Functions

$$1) f(x) = \begin{cases} 2x + 1 & x < -2 \\ \frac{1}{2}x + 3 & x \geq -2 \end{cases}$$

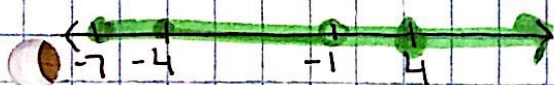


$$2) f(x) = \begin{cases} 4 & x < -8 \\ \frac{3}{4}x + 2 & -8 \leq x < -4 \\ x^2 - 7 & x \geq -4 \end{cases}$$

Domain: $(-\infty, +\infty)$



Range: $[-7, +\infty)$



Intervals Increasing: $(-8, -4) \cup (0, \infty)$

Intervals Decreasing: $(-4, 0)$

