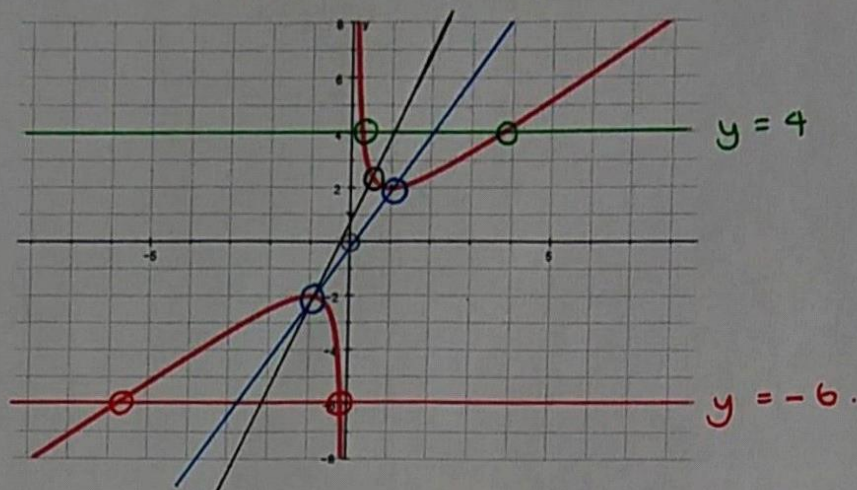


$y = 3x + 1$ $y = 2x$
Intersecting Graphs 1.1



The diagram above shows the graph of $y = x + \frac{1}{x}$. By adding suitable lines to the diagram solve:

- $x + \frac{1}{x} = 4$ $x = 0.2$ $x = 3.9$
- $x + \frac{1}{x} = -6$ $x = -5.9$ $x = -0.1$
- $-x + \frac{1}{x} = 0$ $x = -1$ $x = 1$
- $-2x + \frac{1}{x} - 1 = 0$ $x = -1$ $x = 0.6$

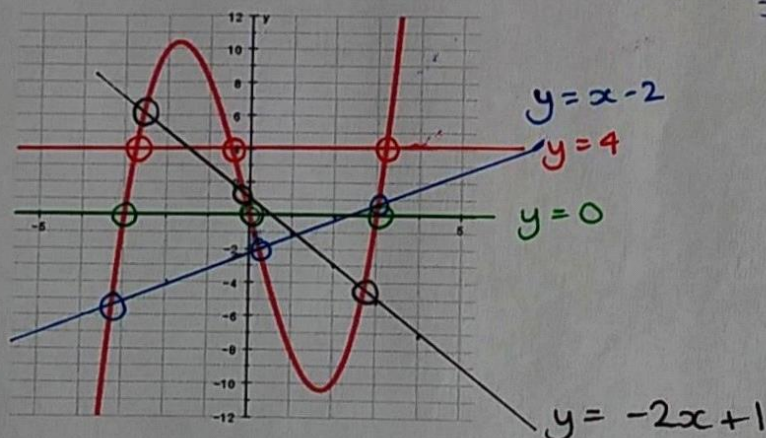
$$-x + \frac{1}{x} = 0 \quad +2x$$

$$x + \frac{1}{x} = 2x \cdot$$

$$-2x + \frac{1}{x} - 1 = 0 \quad +3x$$

$$x + \frac{1}{x} - 1 = 3x + 1$$

$$x + \frac{1}{x} = 3x + 1 \cdot$$



The diagram above shows the graph of $y = x^3 - 9x$. By adding suitable lines to the diagram solve:

- $x^3 - 9x = 0$ $x = -3, 0, 3$ • $x^3 - 9x = 4$ $x = -2.8, -0.3, 3.1$
- $x^3 - 10x + 2 = 0$ $x = -3.2, 0.2, 3.1$ • $x^3 - 7x - 1 = 0$ $x = -2.6, -0.2, 2.8$

$$x^3 - 10x + 2 = 0 \quad +x$$

$$x^3 - 9x + 2 = x \quad -2$$

$$x^3 - 9x = x - 2 \cdot$$

$$x^3 - 7x - 1 = 0 \quad -2x$$

$$x^3 - 9x - 1 = -2x + 1$$

$$x^3 - 9x = -2x + 1 \cdot$$