

a) $3x - 4 > 0$

$$\begin{aligned}\Rightarrow \quad & 3x > 4 \\ \Rightarrow \quad & x > \frac{4}{3} \end{aligned} \qquad L = \left\{ x \in R \mid x > \frac{4}{3} \right\}$$

b) $2x^2 - 4 > 0$

$$\begin{aligned}\Rightarrow \quad & 2x^2 > 4 \\ \Rightarrow \quad & x^2 > 2 \\ \Rightarrow \quad & x > \sqrt{2} \quad \vee \quad x < -\sqrt{2} \end{aligned} \qquad L = \left\{ x \in R \mid x < -\sqrt{2} \quad \vee \quad x > \sqrt{2} \right\}$$

c) $ax + 4 > 0 \quad a \in R$

$$\Rightarrow \quad ax > -4$$

1. Fall: $a > 0$

$$\Rightarrow \quad x > -\frac{4}{a} \qquad L = \left\{ x \in R \mid x > -\frac{4}{a} \right\}$$

2. Fall: $a = 0$

$$\Rightarrow \quad 0 > -4 \qquad L = R$$

3. Fall: $a < 0$

$$\Rightarrow \quad x < -\frac{4}{a} \qquad L = \left\{ x \in R \mid x < -\frac{4}{a} \right\}$$