a) $3x - 4 > 0$

$\Rightarrow \quad 3x > 4$

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

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

$\Rightarrow \quad 2x^2 > 4$

$\Rightarrow \quad x^2 > 2$

$\Rightarrow \quad x > \sqrt{2} \quad \vee \quad x < -\sqrt{2} \qquad\qquad L = \left\{x \in R \mid x < -\sqrt{2} \quad \vee \quad x > \sqrt{2}\right\}$

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

$\Rightarrow \quad ax > -4$

<u>1.Fall:</u> $a > 0$

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

<u>2. Fall:</u> $a = 0$

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

<u>3.Fall:</u> $a < 0$

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