

1.) Find the limit below:

$$\lim_{x \rightarrow \infty} \left(\frac{x - 42}{2x + 3} \right)$$

2.) Find the limit below:

$$\lim_{x \rightarrow -\infty} \left(\frac{x^2 - 42}{x} \right)$$

3.) Calculate the following indeterminate limit:

$$\lim_{x \rightarrow a} \left(\frac{1}{x-a} \left[\frac{1}{x} - \frac{1}{a} \right] \right)$$