

# Limit Scavenger Hunt

$$\lim_{x \rightarrow 1} e^{x^3 - x} =$$

$$\frac{-1}{36}$$

$$\lim_{x \rightarrow -3} \frac{x^2 - 9}{x^2 + 2x - 3} =$$

$$\lim_{x \rightarrow 1^+} \frac{x^2 - 9}{x^2 + 2x - 3} =$$

$$\frac{3}{2}$$

$$\lim_{r \rightarrow 9} \frac{\sqrt{r}}{(r-9)^4} =$$

$$\lim_{x \rightarrow 8^-} \frac{|x - 8|}{x - 8} =$$

$$13. \lim_{x \rightarrow \infty} \frac{1 + 2x - x^2}{1 - x + 2x^2} =$$

$$\lim_{x \rightarrow -\infty} \frac{5x^3 - x^2 + 2}{2x^3 + x - 3} =$$

$$\frac{-1}{2}$$



$$\lim_{x \rightarrow -2} e^{-3x} =$$

$$\lim_{v \rightarrow -\infty} \frac{4 - 2v}{|4 - v|}$$

$$\text{Let } f(x) = \left\{ \begin{array}{ll} \sqrt{-x} & \text{if } x < 0 \\ 3 - x & \text{if } 0 \leq x < 3 \\ (x - 3)^2 & \text{if } x > 3 \end{array} \right\}$$

$$\lim_{x \rightarrow 0} f(x)$$

$$\text{Let } f(x) = \left\{ \begin{array}{ll} \sqrt{-x} & \text{if } x < 0 \\ 3 - x & \text{if } 0 \leq x < 3 \\ (x - 3)^2 & \text{if } x > 3 \end{array} \right\}$$

$$\lim_{x \rightarrow 3} f(x)$$

Does Not Exist

$$\lim_{x \rightarrow 0} \frac{\frac{1}{6+x} - \frac{1}{6}}{x}$$

0