BONUS: Indeterminate Forms and L'Hôpital's Rule

Indeterminate Forms –

Let's return to limits from the start of the year:

With L'Hôpital's Rule

$$\lim_{x \to 1} \frac{x^2 - x}{x^2 - 1}$$

$$\lim_{x \to \infty} \frac{x^2 - 1}{2x^2 + 1}$$

$$\lim_{x \to 1} \frac{\ln x}{x - 1}$$

L'Hôpital's Rule –

$$\lim_{x \to 0} \frac{\sin x}{x}$$

$$\lim_{x \to \infty} \frac{5x^3 + 4x^2 - 7x + 4}{2 + x - 6x^2 + 8x^3}$$

$$\lim_{x \to \infty} \frac{e^x}{x^2}$$

$$\lim_{x \to 0} \frac{\tan x - x}{x^3}$$