5.4 Indeterminate Form & L'Hôpital's Rule

L'Hopital Rule applies if

$\lim_{x \to a} \frac{f(x)}{g(x)}$ is of the form $\frac{0}{0}$ or $\frac{\infty}{\infty}$.

Then $\lim_{x \to a} \frac{f(x)}{g(x)} = \lim_{x \to a} \frac{f'(x)}{g'(x)}$ if it exists

or equal ∞ or $-\infty$.

Indeterminate forms look like:

$\frac{0}{0}$, $\frac{\infty}{\infty}$, 0^0, ∞^0, 1^∞, $\infty - \infty$, $0 \cdot \infty$

Assignment Questions:

5.4.1 (a), (e), (t)

5.4.2 (a), (b), (c), (d)

5.4.3

5.5.3

5.5.8 d, f, g

5.8.1

5.8.14

5.8.19

5.8.28