



Lesson 26: L'Hospital's Rule

Find the following limits using L'Hospital's Rule (Hint: you may have to use L'Hospital's Rule more than once).

1. $\lim_{x \rightarrow 2} \frac{x - 2}{x^2 - 4}$

2. $\lim_{x \rightarrow 0} \frac{\sin(4x)}{x}$

3. $\lim_{x \rightarrow \infty} \frac{5x^2 - 3x}{6x^2 + 2}$

4. $\lim_{x \rightarrow 0} \frac{\sec(x^2) - 1}{5x}$

AP Calculus AB – Unit 4

Dan the Tutor



Learn by Doing

$$5. \lim_{x \rightarrow 2} \frac{-3x^2 + 6x}{2x^3 + x^2 - 10x}$$

$$6. \lim_{x \rightarrow \infty} x^2 e^{-x}$$

$$7. \lim_{x \rightarrow \infty} \frac{e^x + x^2}{x^4 - x}$$

$$8. \lim_{x \rightarrow 0} \frac{x^2}{\ln(\sec x)}$$