

4.7 L'Hospital's Rule

Calculus

Name: _____

CA #2

Find the following. Use L'Hospital's when possible.

1. $\lim_{x \rightarrow 2} \frac{x-2}{x^2-7x+10}$

2. $\lim_{x \rightarrow 0} \frac{x^2}{1-\cos(3x)}$

3. $\frac{d}{dx} \frac{x+3}{x^2-1}$

4. $\lim_{x \rightarrow -5} \frac{x^2+2x-15}{x+5}$

5. $\lim_{x \rightarrow 10} \frac{5-\sqrt{x+15}}{x-10}$

6. $\lim_{x \rightarrow 0} \frac{2e^x-2-2x}{1-\cos x}$

7. $\frac{d}{dx} \frac{e^x}{\cos(2x)}$

1. $-\frac{3}{1}$	2. $\frac{9}{2}$	3. $-\frac{(x^2-1)^2}{x^2+6x+1}$	4. -8	5. $-\frac{1}{10}$	6. 2	7. $\frac{\cos^2(2x)}{e^x \cos(2x) + 2e^x \sin(2x)}$
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Answers to 4.7 CA #2