In-Class Assignment 8: L'Hôpital's Rule

MATH 142

Directions: Work neatly on this page. Your group will hand in one write-up with everyone's name.

1. $\lim_{x\to 2} \dfrac{x^2+x-6}{x-2}$

2. $\lim_{x\to 0} \dfrac{\sin x}{\tan x}$

3. $\lim_{t\to 0} \dfrac{e^{3t}-1}{t}$

4. $\lim_{x\to 1} \dfrac{\ln x}{\sin \pi x}$

5. $\lim_{x\to \infty} x\tan(1/x)$

6. $\lim_{x\to \infty} (e^x+x)^{1/x}$

7. $\lim_{x\to \infty} \dfrac{(\ln(x))^2}{x}$

8. $\lim_{x\to 0} \left(\cot x - \dfrac{1}{x}\right)$

9. $\lim_{x\to \infty} \dfrac{\sqrt{x^2+2}}{\sqrt{2x^2+1}}$