Topic 3: Indeterminate forms and L'Hospital's Rule

Use L'Hospital's Rule to evaluate the limit.

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

2. $\lim_{x\to 0} \frac{x^3}{\sin x - x}$

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

4. $\lim_{x\to 0} \frac{e^x - 1}{\cos x - 1}$

5. $\lim_{x\to 0} \frac{x^2}{\cos x - x}$

6. $\lim_{x\to 1} \frac{\ln(\ln x)}{\ln x}$

Answers

1) $\frac{1}{4}$
2) -6
3) 1
4) *DNE*
5) 0
6) *DNE*