

L'HOSPITAL'S RULE

TEXT: 3.4

LAST NAME	FIRST NAME	DATE
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1 (20 points). Find the following limits:

(a) $\lim_{x \rightarrow \pi/2^+} \frac{\cos(x)}{1 - \sin(x)}$

(b) $\lim_{u \rightarrow \infty} \frac{e^{u/10}}{u^3}$

$$(c) \lim_{x \rightarrow \infty} \frac{(\ln x)^2}{x}$$

(d) $\lim_{x \rightarrow 0^+} \left(\frac{1}{x} - \frac{1}{e^x - 1} \right)$

(e) $\lim_{x \rightarrow 0^+} (4x + 1)^{\cot(x)}$