

# Quiz 11

*Name:* \_\_\_\_\_

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1. Use L'Hôpital's rule to evaluate the following limits:

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

(b)  $\lim_{x \rightarrow \pi} \frac{\sin(x - \pi)}{\ln x - \ln \pi}$

(c)  $\lim_{x \rightarrow \infty} x^2 e^{-x}$