
Solution: It turns out we need to move the exponential term to the denominator before using L'Hopital's Rule, in order to avoid being stuck in an infinite loop.

$$\begin{aligned}\lim_{x \rightarrow 0} \frac{e^{-1/x^2}}{x} &= \lim_{x \rightarrow 0} \frac{x^{-1}}{e^{x^{-2}}} && \text{(moving the } e^{-1/x^2} \text{ to the denominator)} \\ &= \lim_{x \rightarrow 0} \frac{-x^{-2}}{e^{x^{-2}}(-2x^{-3})} && \text{(L'Hopital's Rule)} \\ &= \lim_{x \rightarrow 0} \frac{x}{2e^{x^{-2}}} \\ &= \lim_{x \rightarrow 0} (x) \cdot \lim_{x \rightarrow 0} \frac{1}{2e^{x^{-2}}} \\ &= 0 \times 0 \\ &= 0.\end{aligned}$$