

1. Use of cell phones is NOT allowed.
2. Answers without supporting work will NOT be given credit.
3. You have **25 minutes** to complete this quiz.

Name:

Serial:

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1. Evaluate the following limits:

(a)  $\lim_{x \rightarrow \infty} (xe^{1/x} - x)$

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

(c)  $\lim_{x \rightarrow 1} \left( \frac{1}{\ln x} - \frac{1}{x-1} \right)$

2. Find (if any) **horizontal asymptotes**, **vertical asymptotes** and **slant asymptotes** of the following function:

$$f(x) = \frac{x^2 - x + 4}{2x + 2}$$