

MATH 141: QUIZ 4 SECTIONS 2.6 AND 3.1

ANN CLIFTON
UNIVERSITY OF SOUTH CAROLINA

Name and Section: _____

No phone or calculator. You must show all work to receive full credit. Simplify your coefficients when applicable.

1. **(2 points each)** Find the following limits.

(a) $\lim_{x \rightarrow 8^+} \frac{2x}{8 - x}$

(b) $\lim_{x \rightarrow \infty} \frac{9x^4 + x}{2x^4 + 5x^2 - x + 6}$

2. **(6 points)** Find an equation for the tangent to the curve at the given point using the limit definition.

$$y = 2\sqrt{x} \quad \text{at} \quad (1, 2)$$