

Name \_\_\_\_\_

Section \_\_\_\_\_

SHOW DETAILS (algebra, limit laws) in the space next to each problem. For the experts: do **NOT** use l'Hospital's rule.

YOU MUST GIVE SOME SUPPORTING EVIDENCE. AN ANSWER ALONE WILL NOT RECEIVE FULL CREDIT.

1.  $\lim_{x \rightarrow 2} \frac{\frac{1}{x} - \frac{1}{2}}{x - 2}$

Answer to 1 \_\_\_\_\_

2.  $\lim_{x \rightarrow 9} \frac{x - 9}{\sqrt{x} + 3}$

Answer to 2 \_\_\_\_\_

3.  $\lim_{x \rightarrow \infty} \frac{6x^3 + 5x - 8}{2x^3 + 9}$

Answer to 3 \_\_\_\_\_

**OVER**

4.  $\lim_{x \rightarrow 9^+} \frac{x(x-9)}{\sqrt{x}-3}$

Answer to 4 \_\_\_\_\_

5.  $\lim_{x \rightarrow -1^+} \frac{x^2(x-2)}{x+1}$

Answer to 5 \_\_\_\_\_

6.  $\lim_{x \rightarrow 4} \frac{(x-3)^2 - (x-5)^2}{x-4}$

Answer to 6 \_\_\_\_\_