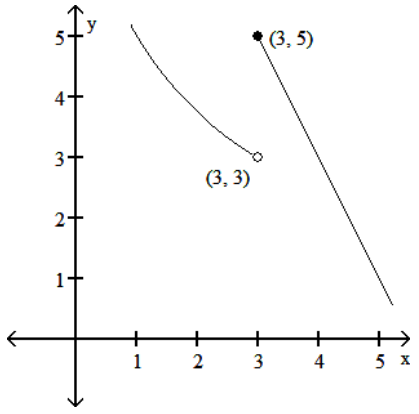
King Fahd University of Petroleum & Minerals
Department of Math and Stat
Math 132 Semester 141 - Quiz 1

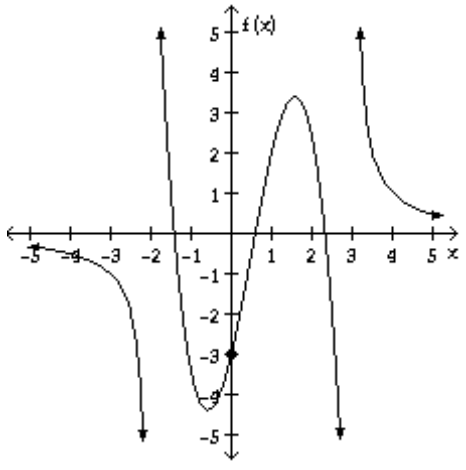
Name_____ ID No._____

1) Find: $\lim_{x \to 3} f(x)$



2) Find: $\lim_{x \to 6} \frac{x^3 - 6x^2}{x - 6}$

3) Find: $\lim_{x \to -2^+} f(x)$



4) Find: $\lim_{x \to 2^+} \frac{3}{2 - x}$. If the limit does not exist, so state and use the symbol ∞ or $-\infty$ if appropriate.

5)

Let $f(x) = \begin{cases} 5, & \text{if } x > 4 \\ x, & \text{if } x \le 4 \end{cases}$. For each of the following, find the limit. If the limit does not exist, so state or use the symbol ∞ or $-\infty$ where appropriate. Hint: Sketch the graph of f.

(a) $\lim_{x \to 4^+} f(x)$

(b) $\lim_{x \to 4^-} f(x)$

(c) $\lim_{x \to 4} f(x)$

(d) $\lim_{x \to \infty} f(x)$

(e) $\lim_{x \to -\infty} f(x)$

6) Find the value(s) of x for which $f(x) = \frac{x^2 - 1}{x^2 - 2x - 8}$ is discontinuous.