H. Intro to Calculus
HW 11.2B: pg. 1027 #43-49 + these problems…

Directions: Graph each function. Then use the graph to find the indicated limits.

1. $f(x) = \frac{3x}{x-1}$
   a. $\lim_{x\to 1^-} f(x)$ b. $\lim_{x\to 1^+} f(x)$ c. $\lim_{x\to\infty} f(x)$ d. $\lim_{x\to-\infty} f(x)$

2. $f(x) = \frac{4x^2}{x^2-9}$
   a. $\lim_{x\to 3^-} f(x)$ b. $\lim_{x\to 3^+} f(x)$ c. $\lim_{x\to\infty} f(x)$ d. $\lim_{x\to-\infty} f(x)$

3. $f(x) = \frac{-2}{x^2-x-2}$
   a. $\lim_{x\to 2^-} f(x)$ b. $\lim_{x\to 2^+} f(x)$ c. $\lim_{x\to\infty} f(x)$ d. $\lim_{x\to-\infty} f(x)$

4. $f(x) = \frac{x-4}{x^2-x-6}$
   a. $\lim_{x\to -2^-} f(x)$ b. $\lim_{x\to -2^+} f(x)$ c. $\lim_{x\to\infty} f(x)$ d. $\lim_{x\to-\infty} f(x)$

5. $f(x) = \frac{3x^2+x-4}{2x^2-5x}$
   a. $\lim_{x\to 0^-} f(x)$ b. $\lim_{x\to 0^+} f(x)$ c. $\lim_{x\to\infty} f(x)$ d. $\lim_{x\to-\infty} f(x)$