Name: _____

Math 1311
Fall 2002
Test I

Show all your work.

1. (a) Find the solution set of

$$\frac{2x-1}{x-2} > 0$$

(b) Write the equation of the line through (-2,1) that is parallel to $3x - 2y = 5$

2. Find

(a) $$\lim_{x \to 2} \frac{1 - \frac{2}{x}}{x^2 - 4}$$

(b) $$\lim_{\theta \to 0} \frac{\tan 5\theta}{\sin 2\theta}$$

(c) $$\lim_{x \to \infty} \sqrt{\frac{1+8x^2}{x^2+4}}$$

3. Sketch the graph of a function f that satisfies all the following conditions.
   (a) Its domain is [-2,2]
   (b) $f(-2) = f(-1) = f(1) = f(2)$
   (c) It is discontinuous at –1 and 1
   (d) It is right continuous at –1 and left continuous at 1

4.

(a) $\lim_{x \to 6^+} f(x)$

(b) $\lim_{x \to 10} f(x)$

(c) Indicate the intervals on which f is continuous.