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

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

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