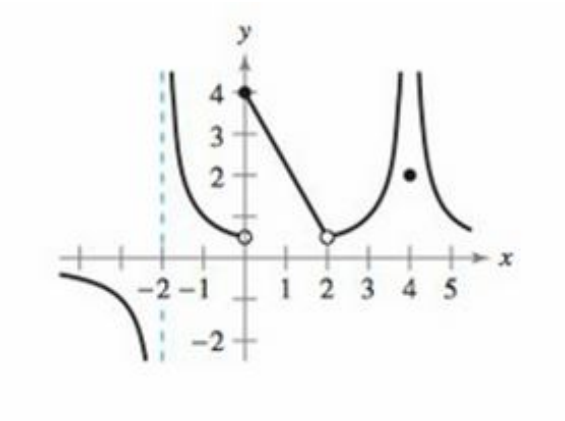
Name: _____ **Quiz 1-B**

Math 151 Calculus I – Crawford **11 September 2019**

Books, notes (in any form), and calculators are not allowed. *Show all your work.* Good Luck!



1. (3 pts) Given the graph of $f(x)$ above, state the value of each quantity below, if it exists. Clearly indicate $+\infty$ or $-\infty$ in the case of an infinite limit. If the quantity does not exist, state DNE.

(a). $\lim_{x \to 0^-} f(x)$

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

(c). $f(2)$

2. (2 pts) For the same function $f(x)$ given above, explain why the function is discontinuous at $x = 0$. i.e., Explain which of the three conditions from the definition of continuity do not hold. [Stating what type of discontinuity is not sufficient.]

3. (10 pts) Evaluate the following limits, if they exist. Clearly indicate $+\infty$ or $-\infty$ in the case of an infinite limit. If the limit does not exist, clearly explain the reason why.

(a). $\lim_{x\to 1} \dfrac{1-2x}{x-1}$

(b). $\lim_{x\to 4} \dfrac{x^2-4x}{x^2-2x-8}$