

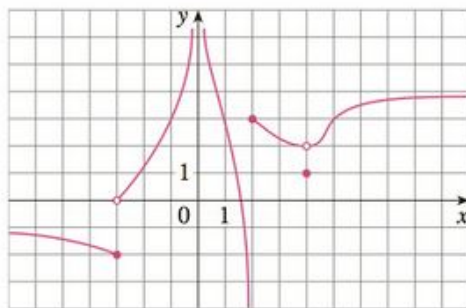
Name: \_\_\_\_\_

Math 151-01 Calculus I – Crawford

Quiz 1-A

12 September 2017

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



1. (5 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).  $\lim_{x \rightarrow -3^+} f(x)$

(b).  $\lim_{x \rightarrow 0} f(x)$

(c).  $\lim_{x \rightarrow 4} f(x)$

(d).  $f(4)$

**2.** (5 pts) Evaluate the following limit, if it exists. Clearly indicate  $+\infty$  or  $-\infty$  in the case of an infinite limit. If the limit does not exist, clearly explain the reason why.

$$\lim_{x \rightarrow -2} \frac{x^2 + 4x + 4}{x^2 - 4}$$

**3.** (5 pts) Evaluate the following limit, if it exists. Clearly indicate  $+\infty$  or  $-\infty$  in the case of an infinite limit. If the limit does not exist, clearly explain the reason why.

$$\lim_{x \rightarrow 3} \frac{x^2 + 1}{x - 3}$$