

**Quiz # 01**

Name:

ID:

1. Find  $\lim_{x \rightarrow -4} \left( \frac{\sqrt{x^2 + 9} - 5}{x + 4} \right)$  if it exists.

2. compute  $\lim_{x \rightarrow 0} \left( \frac{1}{x} - \frac{1}{|x|} \right)$ , if it exists.

3. Use the given graph of  $f(x)$  to find a number  $\delta$  such that if  $|x - 3| < \delta$  then  $|f(x) - 2| < 0.5$ . Write down the reason for your answer.

