

Panel 2

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

Quiz #3

① Consider this graph:

a)  $\lim_{x \rightarrow \infty} f(x)$

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

[10]..2

c) is  $f$  cont. at  $x=a$ ? If not, what type:

d) is  $f$  cont. at  $x=0$ ? If not, what type:

e) is  $f$  cont. at  $x=b$ ? If not, what type:

Panel 3

② Find the following limits

a)  $\lim_{x \rightarrow \infty} \frac{3x^3 - 4x + 1}{2 - 6x^3}$

b)  $\lim_{x \rightarrow 0} \frac{\sin(5x)}{\sin(2x)}$

③ Is the following function continuous at  $x = 1$ ? Justify your answer.

$$f(x) = \begin{cases} 3x - 2 & \text{if } x \leq 1 \\ 2x^2 & \text{if } x > 1 \end{cases}$$