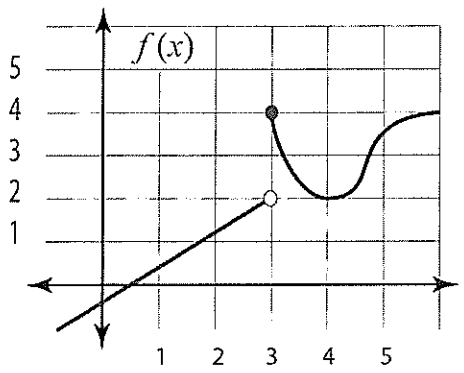
Calculus I. Quiz 2. Name _____ Time_____

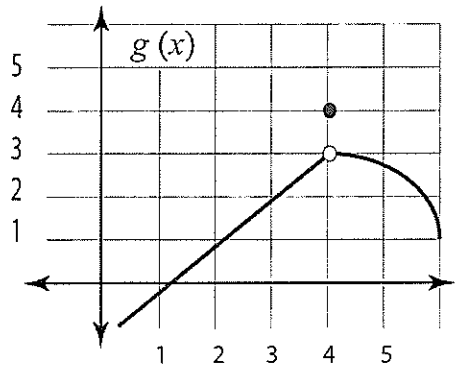
10

Put a box around each final answer.

You can work together, but only if you make sure your classmate(s) understand the solution method!

1. Use the graphs shown for f and g to evaluate each limit (or answer DNE).





a) $\lim_{x\to 3^+} f(x) = ?$

b) $\lim_{x\to 3} f(x) = ?$

c) $\lim_{x\to 3}[\ 2\ + g(x)] = ?$

d) $\lim_{x\to 4} \dfrac{f(x)}{g(x)} = ?$

2. Find the following limits.

a) $\lim_{x\to 3} \dfrac{x^2+3x-1}{5-x} = ?$

b) $\lim_{x\to 3} \dfrac{x^4-18x^2+81}{3-x} = ?$

3. Find the limits or function values, (or answer DNE), given:

$$f(x) = \begin{cases} \frac{x-1}{3x(x-1)} & \text{for } x < 1 \\ 7x & \text{for } 1 \le x \le 9 \end{cases}$$

a) $f(1) = ?$

b) $\lim_{x\to 1^+} f(x) = ?$

c) $\lim_{x\to 1^-} f(x) = ?$

d) $\lim_{x\to 1} f(x) = ?$