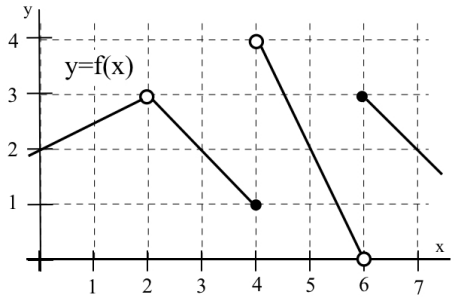
Math 151
January 9, 2018 Name _____
Quiz #1A (please print)

1. Write the equation of the line that goes through the point (1, 4) with slope 3? y = _____

(2)

2. The following limits refer to the graph of f in the diagram.



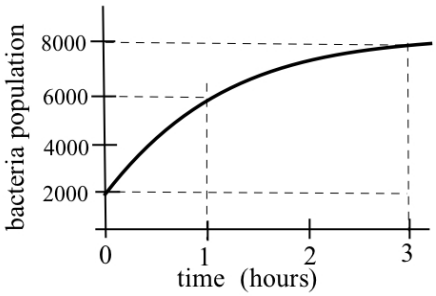
(a) $\lim_{x \to 2} f(x)$ =___ (b) $\lim_{x \to 4^+} f(x)$ = _____

(1 each)

(c) $\lim_{x \to 6^-} f(x)$ = ____ (d) $\lim_{x \to 2} f(x+3)$ =_____

(e) $\lim_{h \to 0} \frac{f(1+h)-f(1)}{h}$ =___ (f) $\lim_{h \to 0} \frac{f(5+h)-f(5)}{h}$ =_____

3. The diagram shows the bacteria population (B) at different times (t).



(1) (a) What is the initial population? _____

(2) (b) What is the average rate population change
from time t=1 to t=3 hours? _____

(c) The bacteria population is increasing more rapidly at

(1) t= 1 t= 3 same (circle one)

4. $\lim_{x \to 2} \frac{x^2+2x-8}{x^2-x-2}$ = _____ $\lim_{x \to 4^+} \frac{|4-x|}{4-x}$ = _____ $\lim_{x \to 2^-}$ INT(x + 4) = _____

(2 each)

5. Given an arbitrary function f, if $\lim_{x \to 1} f(x) = 3$ then what is f(1)? Answer: _____

(1) a) 1 b) 3 c) It must be close to 3
d) f(1) is not defined e) Not enough information is given

6. If a very small positive number is divided by another very small positive number, the result (choose one) Answer: _____

(1) a) must be a number very close to zero b) must be a number close to 1
c) could be any positive number d) might not be a number

7. If the units of x are miles and the units of y=f(x) are gallons, then the units of the slope are _____

(1)