MATH-241 Calculus I Homework 2	Created by Rukiyah Walker Spring 2023
QUESTION 1	(1 pts)
A tangent line is:	(1 /
A. A line that goes through a circle.	
B. A line that touches a curve at a single point.	
C. A line that intersects two points on a curve.	
D. A curve.	
· · · · · · · · · · · · · · · · · · ·	(1 pts)
A secant line is:	
A. A line that touches a curve at a single point.	
B. A curve.	
C. A line that intersects two points on a curve.	
D. The diameter of a circle.	
What is the slope of the tangent line?	(1 pts)
A. $y = mx + b$	
B. The secant line.	
C. The average velocity.	
D. The limit of the slopes of the secant lines.	
What is the slope of the secant line?	(1 pts)
A. The average velocity.	
B. The tangent line.	
C. The diameter of a circle.	
D. The instantaneous velocity.	

QUESTION 5

(1 pts)

What is the instantaneous velocity?

A. Change in position over change in time.

B. The slope of the tangent line.

C.
$$s(t) = 4.9t^2$$

D. Acceleration.

QUESTION 6

(1 pts)

 $\lim_{x\to a} f(x) = L$ means:

A. "the limit as x approaches a is f(x)"

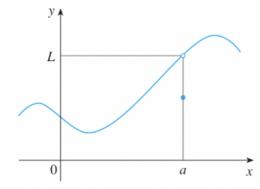
B. "the limit of f(x), as x approaches a, does not exist"

C. "the values of f(x), as x approaches a, approaches L"

D. "the limit, L, equals f(x)"

_ Question 7

 $_{-}$ (1 pts)



Which of the following represents the graph above?

A.
$$L \neq f(a)$$

B. f(a) not defined.

C.
$$L = f(a)$$

D.
$$\lim_{x\to a} f(x) = \infty$$

 $_$ (1 pts)

QUESTION 8 $\lim_{x\to a} f(x) = L$ if and only if:

A.
$$\lim_{x\to a^+} f(x) = L$$
 and $\lim_{x\to a^-} f(x) = M$, with $L \neq M$

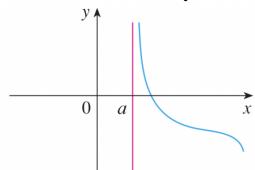
B.
$$\lim_{x\to a^+} f(x) = L$$
 and $\lim_{x\to a^-} f(x) = L$

C.
$$\lim_{x\to a^+} f(x) = L$$
 does not exist.

D.
$$\lim_{x\to a^-} f(x) = L$$
 does not exist.

QUESTION 9

(1 pts)



Which of the following represents the graph above?

A.
$$\lim_{x\to a^-} f(x) = \infty$$

B.
$$\lim_{x\to a} f(x) = \infty$$

C. $\lim_{x\to a} f(x)$ does not exist.

D.
$$\lim_{x\to a^+} f(x) = \infty$$

_ Question 10

(1 pts)

Which of the following is a case when the vertical line, x = a, is called a vertical asymptote of the curve y = f(x)?

A. When the limit does not exist.

B. When
$$x = y$$

C.
$$\lim_{x\to a} f(x) = \infty$$

D. When there is a horizontal asymptote.