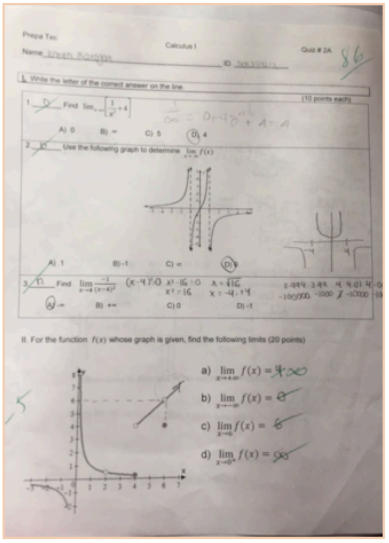
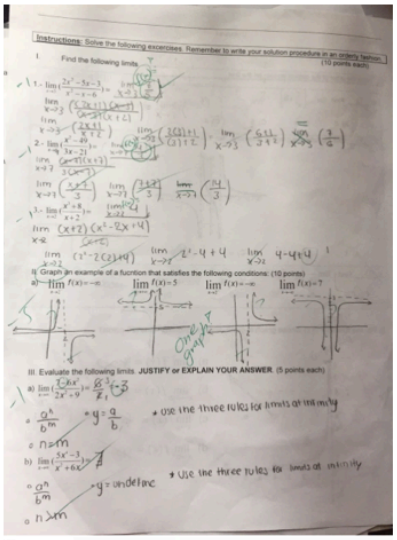
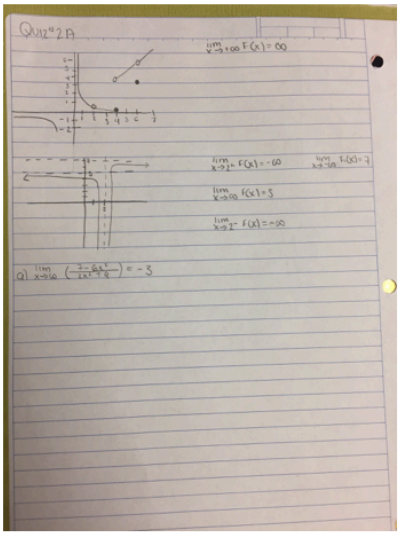
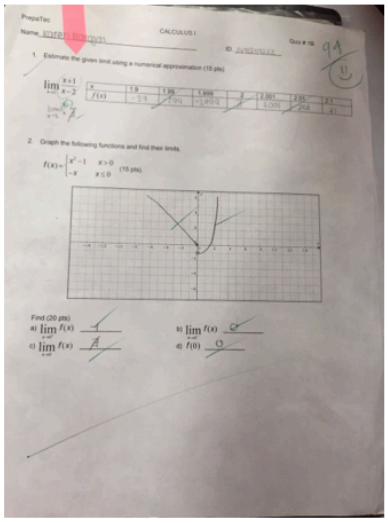
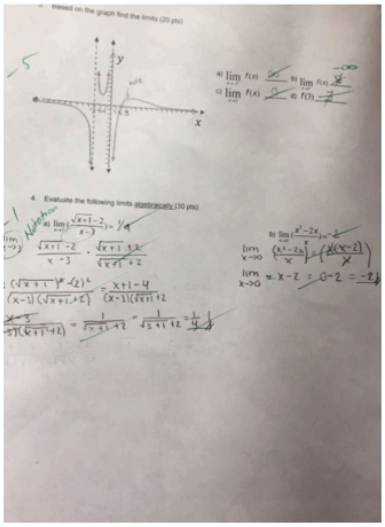
First Partial Quizzes

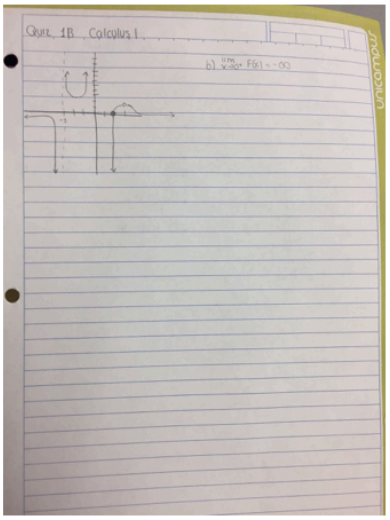




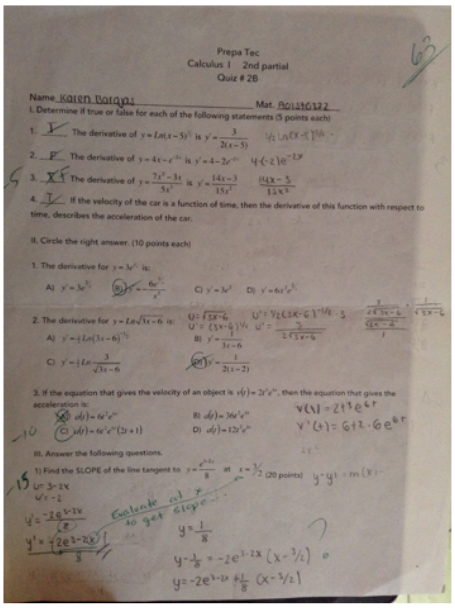








Second Partial Quiz



Prepa Tec
Calculus I 2nd partial
Quiz # 2B

Name Karen Baraja Mat. A01376372

I. Determine if true or false for each of the following statements (5 points each)

1. T The derivative of $y = Ln(x-5)^2$ is $y' = \frac{3}{2(x-5)}$
2. F The derivative of $y = 4x - e^{-2x}$ is $y' = 4 - 2e^{-2x}$
3. T The derivative of $y = \frac{7x^2-3x}{5x^2}$ is $y' = \frac{14x-3}{15x^2}$ $\frac{14x-5}{15x^2}$
4. T If the velocity of the car is a function of time, then the derivative of this function with respect to time, describes the acceleration of the car.

II. Circle the right answer. (10 points each)

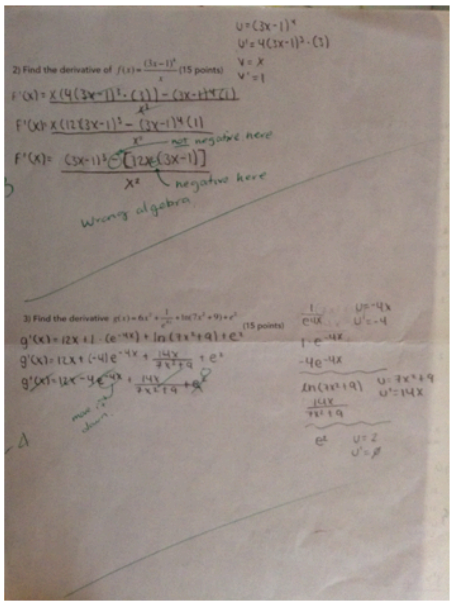
1. The derivative for $y = 3e^{2x}$ is:
A) $y' = 3e^{2x}$ B) $y' = -\frac{6e^2}{x^2}$ C) $y' = 3e^2$ D) $y' = 6xe^{2x}$

2. The derivative for $y = Ln\sqrt{3x-6}$ is:
A) $y' = \frac{1}{2}Ln(3x-6)^{-1/2}$
B) $y' = \frac{1}{3x-6}$
C) $y' = \frac{1}{2}Ln\frac{3}{3x-6}$
D) $y' = -\frac{1}{2(x-2)}$

3. If the equation that gives the velocity of an object is $v(t) = 2t^2e^{3t}$, then the equation that gives the acceleration is:
A) $a(t) = 6t^2e^{3t}$ B) $a(t) = 36t^2e^{3t}$
C) $a(t) = 6t^2e^{3t}(2t+1)$ D) $a(t) = 12t^2e^{3t}$

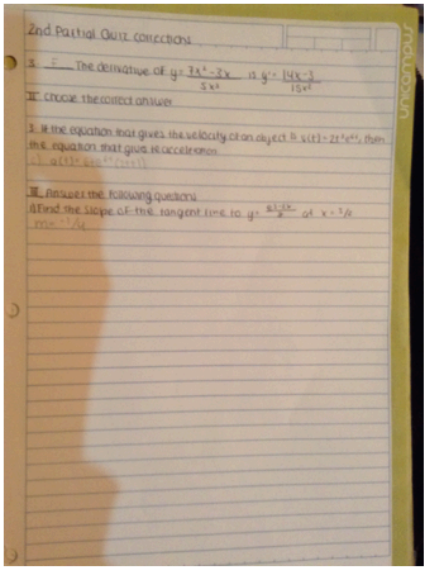
III. Answer the following questions.

1) Find the SLOPE of the line tangent to $y = \frac{e^{2x}}{8}$ at $x = 3/2$ (20 points)



2) Find the derivative of $f(x) = \frac{(3x-1)^4}{x}$ (15 points)

3) Find the derivative $g(x) = 6x^2 + \frac{1}{e^{4x}} + \ln(7x^2+9) + e^x$ (15 points)



2nd Partial Quiz corrections

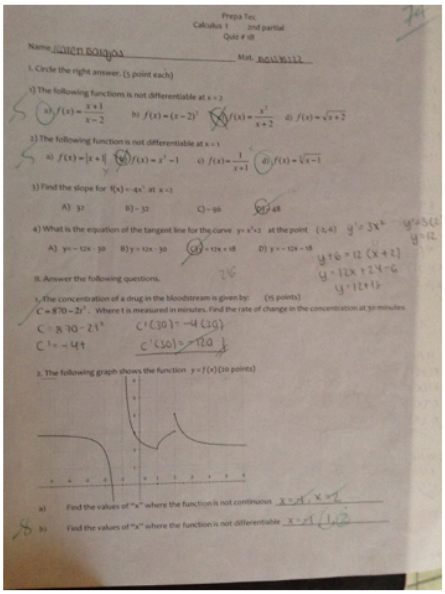
I. F The derivative of $y = \frac{7x^2-3x}{5x^2}$ is $y' = \frac{14x-3}{15x^2}$

II. Circle the correct answer.

3. If the equation that gives the velocity of an object is $v(t) = 2t^2e^{3t}$, then the equation that gives the acceleration is:

III. Answer the following questions.

i) Find the slope of the tangent line to $y = \frac{e^{2x}}{8}$ at $x = 3/2$



Prepa Tec
Calculus I 2nd partial
Quiz # 1B

Name Karen Baraja Mat. A01376372

I. Circle the right answer. (5 point each)

1) The following functions is not differentiable at x = 2
a) $f(x) = \frac{x+1}{x-2}$ b) $f(x) = (x-2)^2$ c) $f(x) = \frac{x^2}{x+2}$ d) $f(x) = \sqrt{x+2}$

2) The following function is not differentiable at x = 1
a) $f(x) = |x+1|$ b) $f(x) = x^2 - 1$ c) $f(x) = \frac{1}{x+1}$ d) $f(x) = \sqrt[3]{x-1}$

3) Find the slope for $f(x) = -4x^2$ at x = 2
A) 32 B) -32 C) -96 D) -48

4) What is the equation of the tangent line for the curve $y = x^3 + 2$ at the point (-2,-6)
A) $y = -12x - 30$ B) $y = 12x - 30$ C) $y = 12x + 18$ D) $y = -12x - 18$

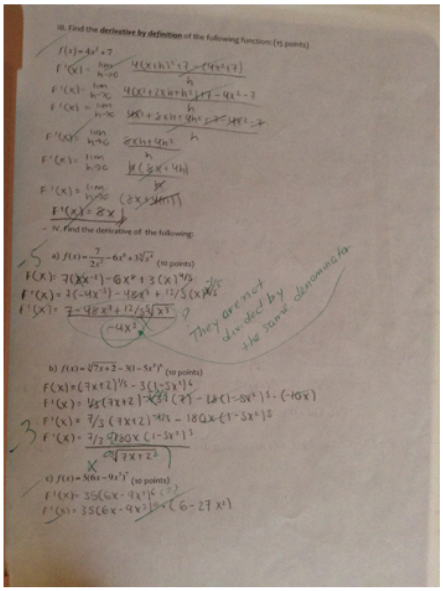
II. Answer the following questions.

1. The concentration of a drug in the bloodstream is given by: (15 points)
$C = 8.70 - 2t^3$. Where t is measured in minutes. Find the rate of change in the concentration at 30 minutes.

2. The following graph shows the function $y = f(x)$ (10 points)

a) Find the values of "x" where the function is not continuous $x = -1, x = 2$

b) Find the values of "x" where the function is not differentiable $x = -1, 1, 2$



III. Find the derivative by definition of the following function: (15 points)
$f(x) = 4x^2 + 7$

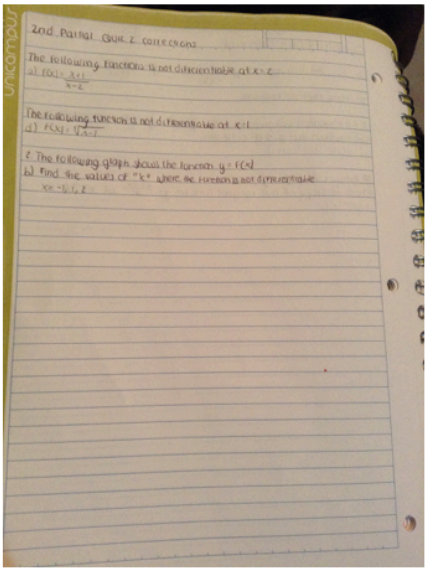
IV. Find the derivative of the following:

a) $f(x) = \frac{7}{2x^2} - 6x^4 + 3\sqrt[5]{x^3}$ (10 points)

They are not divided by the same denominator

b) $f(x) = \sqrt[3]{7x+2} - 3(1-5x^2)^6$ (10 points)

c) $f(x) = 5(6x - 9x^2)^3$ (10 points)



2nd Partial Quiz 2 corrections

The following function is not differentiable at x = 2

a) $f(x) = \frac{x+1}{x-2}$

The following function is not differentiable at x = 1

d) $f(x) = \sqrt[3]{x-1}$

2. The following graph shows the function $y = f(x)$

b) Find the values of "x" where the function is not differentiable

$x = -1, 1, 2$