Sara B.

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter:
Date:	Writer/Prep:
Topics:	QC/Leader: Darth Vader

Instructions: (1)

Calculus : the study of change

It is used for engineering and real-world applications.

GROUP NAME: Busy Bees Logo:	Student Names (First and Last) Speaker/Presenter: Donna Nelson-Hutchinson
Date: 3/25/13 Topics:	Writer/Prep: Tiffany Geveras QC/Leader: Nishani Carter

Instructions:

2

$$\frac{\Delta s}{\Delta t} = \frac{s(2)-s(0)}{2-0} = \frac{-1-5}{2}$$

$$= \frac{-6}{2} = -3$$

$$s(t) = t^2 - 5t + 5$$

$$v(t) = 2t - 5$$

$$= 2(1) - 5 = -3$$

Ave: -3

instantaneous: -3

GROUP NAME: B/J - specs	Student Names (First and Last) Sara Zimmerman
Logo:	Speaker/Presenter:
Date:	Writer/Prep:
Topics:	QC/Leader:

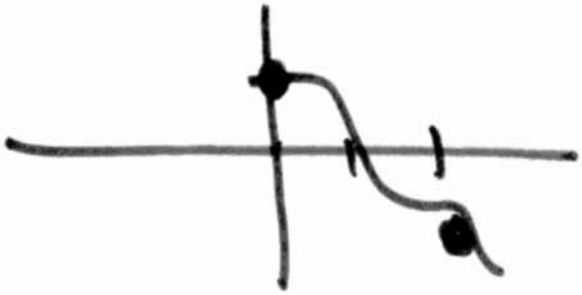
Instructions:

3

#2 $f(t) = t^2 - 5t + 5$ CONTINUOUS

$f(0) = 5$ ⊕ ✓

$f(2) = 4 - 10 + 5 = -1$ ⊖ ✓



by Intermediate Value Theorem

Intermediate Value Theorem

Then $f(c) = 0$

$0 \leq c \leq 2$

GROUP NAME: Busy Bees

Logo: 

Date: 3/25/13

Topics:

Student Names (First and Last)

Speaker/Presenter: Donna Nelson-Hutchins

Writer/Prep: Tiffany Geveras

QC/Leader: Nishma Carter

Instructions:

4

Find y' if $y = \frac{\cos(3x^2+7)}{x}$

$$y' = \frac{[\cos(3x^2+7)]'x - \cos(3x^2+7)}{x^2}$$

$$= \frac{-6x^1 \sin(3x^2+7)x - \cos(3x^2+7)}{x^2}$$

$$= \frac{-6x^2 \sin(3x^2+7) - \cos(3x^2+7)}{x^2}$$

GROUP NAME:	Student Names (First and Last) James Hulbert
Logo:	Speaker/Presenter: _____
Date: _____	Writer/Prep: _____
Topics:	QC/Leader: _____

Instructions:

5

$$y = e^{2x} \sin^{-1}(\ln x)$$

$$y' = (e^{2x})(2)\sin^{-1}(\ln x) + (e^{2x})\left(\frac{1}{x}\right)\frac{1}{\sqrt{1-(\ln x)^2}}$$

$$y' = \left[2e^{2x}\sin^{-1}(\ln x) + \frac{e^{2x}}{x\sqrt{1-(\ln x)^2}}\right]$$

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter:
Date:	Writer/Prep:
Topics:	QC/Leader:

Instructions:

6

$$y = x^{\tan x}$$

$$\ln y = \tan x \ln x$$

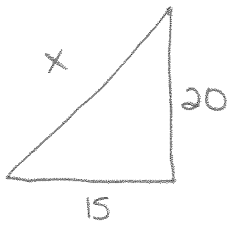
$$\frac{1}{y}\frac{dy}{dx} = (\sec^2 x)(\ln x) + (\tan x)\left(\frac{1}{x}\right)$$

$$\frac{dy}{dx} = \left[(\sec^2 x)(\ln x) + \frac{\tan x}{x}\right]$$

$$\frac{dy}{dx} = \left[(\sec^2 x)(\tan x) + \frac{\tan x}{x}\right] x^{\tan x}$$

GROUP NAME: Bio specs Logo:	Student Names (First and Last) Speaker/Presenter: Sara Miouie
Date:	Writer/Prep: Sara
Topics:	QC/Leader: Darth Vader

Instructions: 7



$(15)^2 + (20)^2 = (c)^2$

$225 + 400 = c^2$

$625 = c^2$

$25 = c$

$2\frac{dx}{dt} + 2\frac{dy}{dt} = 2\frac{dz}{dt}$

$2(\cancel{15})(\cancel{0}) + 2(20)(10\ \frac{ft}{sec}) = 2(25)\frac{dz}{dt}$

$400 = 50\frac{dz}{dt}$

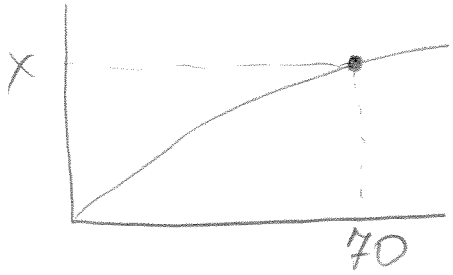
$\frac{dz}{dt} = 8\ \frac{ft}{sec}$

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: Sergey Lykhachov
Date:	Writer/Prep: Jay Parbel
Topics:	QC/Leader: Oleg

Instructions:

8

Evaluate of $\sqrt{70}$ using derivatives



$f(x) = \sqrt{x}$

$f'(x) = \frac{1}{2} x^{-1/2}$

$f'(64) = \frac{1}{2} 64^{-1/2}$

$f'(64) = \frac{1}{2} \cdot \frac{1}{8} = \frac{1}{16}$

$(64, 8)$ $m = \frac{1}{16}$

$Y - 8 = 1/16 (x - 64)$ => point slope form

$Y = 8 + \frac{1}{16} (x - 64)$

$Y = 8 + \frac{1}{16} (70 - 64)$

$8\frac{1}{16}$ or $8\frac{3}{8}$ or 8.375

GROUP NAME: BALLS Logo:	Student Names (First and Last) ERIC M, GABE M., MIKE G. Speaker/Presenter:
Date: 3/25/13 Topics:	Writer/Prep: QC/Leader:

Instructions:

9

$f(x) = 4x^2 - 7$ Use definition of derivative to find derivative of function

$$\lim_{h \to 0} = \frac{f(x+h) - f(x)}{h}$$

$f(x+h) = [4(x+h)^2 - 7]$

$[4(x^2 + 2xh + h^2) - 7]$

$$\frac{f(x+h) - f(x)}{h} = \frac{8xh + 4h^2}{h}$$

$$= \frac{4h(2x+h)}{h}$$

$$f(x) = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h} \cdot h = 8x$$

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: Don Garcia
Date:	Writer/Prep: Derrick A
Topics:	QC/Leader: Don Beck Sushil Jayanth

Instructions:

10

$(1, -3)$ $F(x) = 4x^2 - 7$

$F'(x) = 8$

$y - y_1 = m(x - x_1)$

$y + 3 = 8(x - 1)$

$y + 3 = 8x - 8$

$y = 8x - 8 - 3$

$y = 8x - 11$

GROUP NAME: HOT SHOTS	Student Names (First and Last)
Logo:	Speaker/Presenter: ORSANA POBEREZHNA
Date:	Writer/Prep: OLIMPIU DIOSTEANU
Topics:	QC/Leader: Amy Mueller

Instructions:

11

$$\lim_{x\to\infty} \frac{\sin(x^{\tan x})}{x} = 0$$

$\sin(\alpha) = [-1;1]$

$\frac{-1}{\infty} = 0 \qquad \frac{1}{\infty} = 0$

$$-\frac{1}{x} \le \frac{\sin(x^{\tan x})}{x} \le \frac{1}{x}$$

$\lim_{x\to\infty} -\frac{1}{x} = 0$ $\qquad$ $\lim_{x\to\infty} \frac{1}{x} = 0$

$$\lim_{x\to\infty} \frac{\sin(x^{\tan x})}{x} = 0$$

by SQUEEZE THRM

GROUP NAME: Snoopalos

Logo:

Date: 3/25/13

Topics:

Student Names (First and Last)

Speaker/Presenter: Nick Ignorato

Writer/Prep: Alicia Ackets

QC/Leader: Stephen Smith

Instructions:

Midterm Practice

12

$$\lim_{x\to\infty} x^2 \cdot e^{-3x} = \lim_{x\to\infty} \frac{x^2}{e^{+3x}} = \frac{\infty}{\infty}$$ use L'H R

$$= \lim_{x\to\infty} 2x - 3e^{-3x} = \lim_{x\to\infty} \frac{2x}{3e^{3x}}$$

$$= \lim_{x\to\infty} \frac{2x}{3e^{3x}} = \frac{2(\infty)}{3(\infty)}$$

use L'H R.

$$= \lim_{x\to\infty} \frac{2}{9e^{3x}} = \frac{2}{\infty} = 0$$

GROUP NAME:	Student Names (First and Last)
Logo:	Speaker/Presenter: *Dan Beck*
Date:	Writer/Prep: Dan Garcia
Topics:	QC/Leader: Sushil Inggarti, Derrick A

Instructions:

13

(13) $\lim_{x \to \infty} \frac{6x+1}{2x+2} \overset{\text{LHR}}{=} \lim_{x \to \infty} \frac{6}{2} = 3$

GROUP NAME: ~~S41~~ HOT SHOTS	Student Names (First and Last)
Logo:	Speaker/Presenter: OKSANA POBEREZHNY
Date: 3/25	Writer/Prep: OLIMPIA
Topics:	QC/Leader: Amy Mueller

Instructions:

14

$\lim_{x \to 2} (2x - 3) = 1$

$|f(x) - L| < \varepsilon$

$|2x - 3 - 1| < \varepsilon$

$|2x - 4| < \varepsilon$

$2|x - 2| < \varepsilon$

$|x - 2| < \frac{\varepsilon}{2} = \delta$

Sara Zimmermann

GROUP NAME: Bio specs

Logo:

Student Names (First and Last)

Sara Moore

Speaker/Presenter: _____

Date: 3/25/15

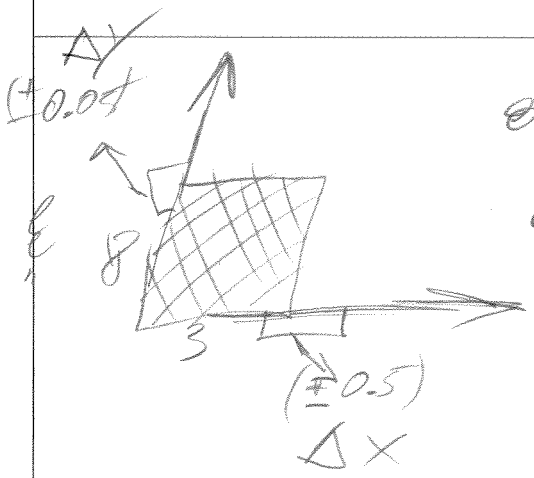
Writer/Prep: _____

Topics:

QC/Leader: _____

Instructions:

15



- error in length (0.05) (ΔY)
- error in width (0.5) (Δx)

$\Delta A = (X \cdot \Delta Y) + (Y \cdot \Delta X)$

$\Delta A = (3 \cdot 0.05) + (8 \cdot 0.5)$

$\Delta A = 4.15$

[A = W·L]

- error in measuring the area is: 4.15.

$A = LW$

$dA = L \cdot dw + w \cdot dL$

$3.(\pm.05) \quad 8\ (\pm 0.5)$

$\pm .15 + \pm 4$

± 4.15