Math 1A (9:30am - 10:20am) Quiz 3 Fri Jan 23, 2009

SCORE: / 20 POINTS

What month is your birthday? What are the first 2 digits of your address?

What are the last 2 digits of your zip code?

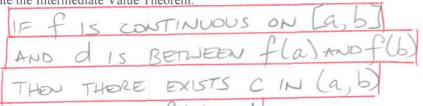
What are the last 2 digits of your social security number?

[IF YOU DO NOT HAVE A SOCIAL SECURITY NUMBER, **USE YOUR STUDENT ID NUMBER**

NO CALCULATORS A

State the Intermediate Value Theorem

SCORE: ___ / 2 POINTS



SUCH

Evaluate the following limits. Give your answers as ∞ , $-\infty$, a number or DNE.

SCORE: ___/ 12 POINTS

The answer should be DNE only if the other answers do not apply.

Show supporting work and/or give a brief explanation. You may use the shorthand notation shown in lecture.

[a]
$$\lim_{x \to 3^+} \frac{1-x}{\sqrt{x^2-9}} = -\infty$$

$$\lim_{x \to 1} \frac{x-2}{(x-1)^3} \quad DNE$$

$$\lim_{x \to 1^+} \frac{x-2}{(x-1)^3} = -\infty$$

[c]
$$\lim_{x \to 2^{+}} \frac{x^2 - 5}{(x+2)^2} = \frac{-1}{16}$$

[d]

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[d]

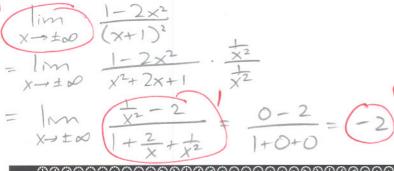
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Find all horizontal asymptotes of $f(x) = \frac{1 - 2x^2}{(x+1)^2}$.

SCORE: /4 POINTS

Show supporting work as demonstrated in lecture. DO NOT USE PRECALCULUS SHORTCUTS.



[MULTIPLE CHOICE] Find $\lim e^{-\tan x}$.

SCORE: /2 POINTS

[b] [a] $-\infty$

LETTER OF CORRECT ANSWER: [