

NAME: _____

Math 200 Calculus I (Bueler)

February 5, 2008

Quiz #1

20 points total. You have 20 minutes.

1. Is the function $f(x) = x + 2$

EVEN, ODD, or NEITHER.

(Circle one of the underlined terms.)

2. Find the domain and sketch the graph of this function:

$$f(x) = \begin{cases} x^{-1}, & x < -1, \\ x + 2, & x \geq -1. \end{cases}$$

3. Let $f(x) = e^x$ and $g(x) = \sqrt{x}$. Give the domains of the new functions $f \circ g$ and $g \circ f$.

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4. In terms of the definitions given in lecture (and in the textbook), why is

$$2^{\log_2 x} = x \quad ?$$

5. (a) Is e^2

BIGGER or SMALLER than 6?

(Circle one of the underlined terms.)

(b) Is e^{-5}

NEGATIVE, POSITIVE, or NEITHER?

(Circle one of the underlined terms.)

6. Let $f(x) = 3x$ and let

$$g(x) = \frac{f(2+x) - f(2)}{x}.$$

Sketch the graph $y = g(x)$.