

**MATH 1A – QUIZ 2**

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Name: \_\_\_\_\_

**Instructions:** You have 15 minutes to take this quiz, for a total of 10 points. **Show your work, and box your answers!** Good luck, and don't worry, you'll be fine!

(1) (8 points) Consider the following function:

$$f(x) = \cos^{-1}(e^x)$$

(a) (2 points) Find the domain of  $f$

(b) (2 points) Find the range of  $f$

(TURN PAGE!!!)

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$$f(x) = \cos^{-1}(e^x)$$

(c) (2 points) Show that  $f$  is one-to-one

(d) (2 points) Find a formula for  $f^{-1}(x)$

(2) (2 points total) Evaluate the following limits:

(a) (1 point)

$$\lim_{x \rightarrow 1^+} \ln(x^2 - 1)$$

(b) (1 point)

$$\lim_{x \rightarrow \frac{1}{2}} \sin^{-1}(x)$$