QUIZ #2: CALCULUS 1A (Stankova)
Wednesday, February 4, 2004
Section 10:00–11:00 (Voight)

Name:

Please complete the following problem(s) in the space provided. You may *not* use a calculator. You will have 15 minutes to complete the quiz.

Please include all relevant intermediate calculations and explain your work when appropriate.

Problem 1. *Evaluate the limit, if it exists:*

$$\lim_{h\to 0} \frac{(3+h)^{-1} - 3^{-1}}{h}.$$

QUIZ #2: CALCULUS 1A (Stankova)
Wednesday, February 4, 2004
Section 11:00–12:00 (Voight)

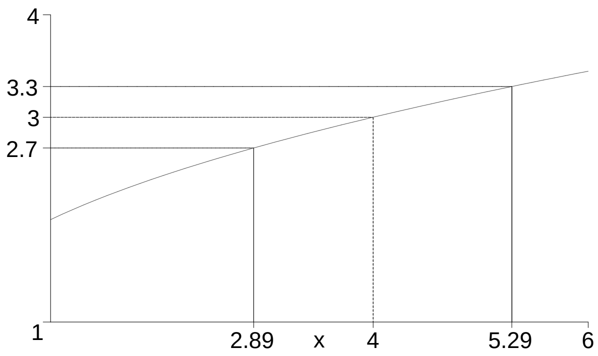
Name:

Please complete the following problem(s) in the space provided. You may *not* use a calculator. You will have 15 minutes to complete the quiz.

Please include all relevant intermediate calculations and explain your work when appropriate.

Problem 1. *Use the given graph of* f *to find a number* δ *such that*

$$|f(x) - 3| < 0.3 \quad \textit{whenever} \quad 0 < |x - 4| < \delta.$$



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Problem 2. *Prove the statement using the ϵ, δ definition of limit. Illustrate with a graph.*

$$\lim_{x \to a} c = c.$$

[Hint: There may be more than one correct answer. Justify your reasoning.]