

QUIZ #13: CALCULUS 1A (Stankova)

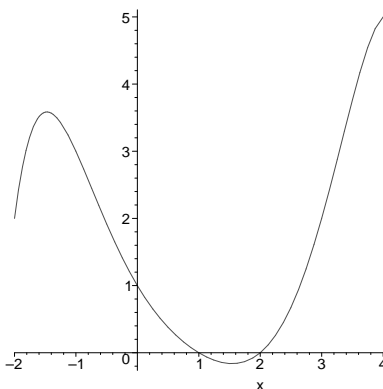
Wednesday, April 28, 2004
Section 10:00–11:00 (Voight)

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. Let $g(x) = \int_{-2}^x f(t) dt$, where f is the function shown.



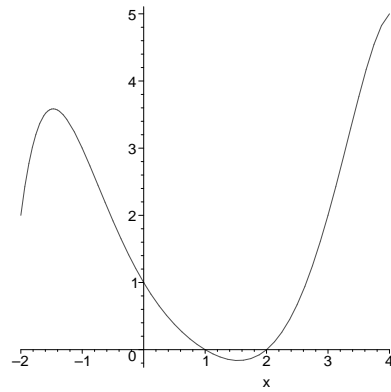
(a) Evaluate $g(-2)$.

(b) Is $g(4) > 0$? Explain.

(c) Estimate $g(0)$.

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(d) Where does g have a maximum value in the interval $[-2, 4]$?

(e) Draw a (very) rough graph of g .

QUIZ #13: CALCULUS 1A (Stankova)

Wednesday, April 28, 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 *Fundamental Theorem of Calculus (Part 1)* to find the derivative of the function

$$y = \int_1^{x^2} (\sqrt{t} + \ln t) dt.$$

Problem 2. Use the *Fundamental Theorem of Calculus (Part 2)* to evaluate the integral.

$$\int_1^2 \frac{6 + \sqrt{u}}{u^2} du.$$