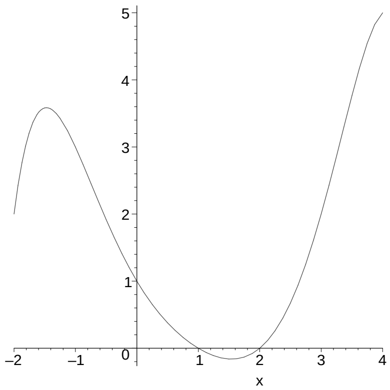
QUIZ #13: CALCULUS 1A (Stankova)
Wednesday, April 28, 2004
Section 10:00–11:00 (Voight)

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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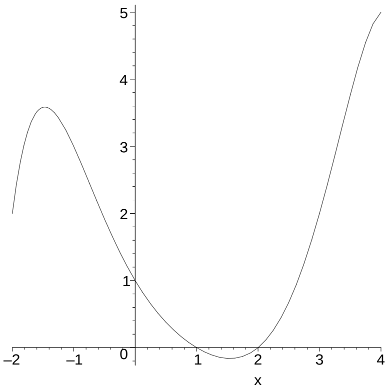

(d) *Where does g have a maximum value in the interval* $[-2, 4]$*?*

(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.*

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