

Quiz
November 28, 2007

Solutions of all problems must be accompanied by relevant explanations.

Problem 1. Choose your answer (exactly one answer correct, no explanations

required) Definite integral $\int_{-1}^3 f(x)dx$ is equal to

a) $\int_{-1}^0 f(x)dx + \int_3^0 f(x)dx$

b) $\int_0^{-1} f(x)dx + \int_0^3 f(x)dx$

c) $-\int_3^0 f(x)dx - \int_0^{-1} f(x)dx$

d) $\int_{-1}^0 f(x)dx - \int_0^3 f(x)dx$

e) $\int_1^0 f(x)dx + \int_0^3 f(x)dx$

Definite integral $\int_{-5}^{-2} g(t)dt$ is equal to

a) $\int_{-7}^{-2} g(t)dt - \int_{-5}^{-7} g(t)dt$

b) $\int_{-5}^3 g(t)dt + \int_{-3}^{-2} g(t)dt$

c) $\int_{-2}^{-3} g(t)dt + \int_{-5}^{-3} g(t)dt$

d) $-\int_1^{-9} g(t)dt + \int_1^{-2} g(t)dt - \int_{-9}^{-5} g(t)dt$

e) $\int_{-5}^{-9} g(t)dt + \int_{-9}^1 g(t)dt + \int_{-2}^1 g(t)dt$

Problem 2. Find the definite integral $\int_{-1}^0 e^{x+1} dx$.

Problem 3. Find $F'(x)$ if $F(x) = \int_{\cos 1}^{\cos x} \sin t dt$.