

5.3 Riemann Sums and Definite Integrals

Name:

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P 4. Evaluate the definite integral by the limit definition.

$$\int_{-2}^3 x \, dx$$

P 6. Evaluate the definite integral by the limit definition.

$$\int_1^4 4x^2 dx$$

P 8. Evaluate the definite integral by the limit definition.

$$\int_{-2}^1 (2x^2 + 3) dx$$

P 20. Set up but do not evaluate, the definite integral that yields the area of the region bounded by the graphs of

$$f(x) = \frac{4}{x^2 + 2}, y = 0, x = -1, \text{ and } x = 1$$

P 26. Set up but do not evaluate, the definite integral that yields the area of the region bounded by the graphs of

$$f(x) = e^{-x}, y = 0, x = 0, \text{ and } x = 2$$

P 46. Given

$$\int_0^3 f(x) dx = 4 \text{ and } \int_3^6 f(x) dx = -1$$

(a) $\int_0^7 f(x) dx$

(b) $\int_5^0 f(x) dx$

(c) $\int_5^5 f(x) dx$

(d) $\int_0^5 3f(x) dx$