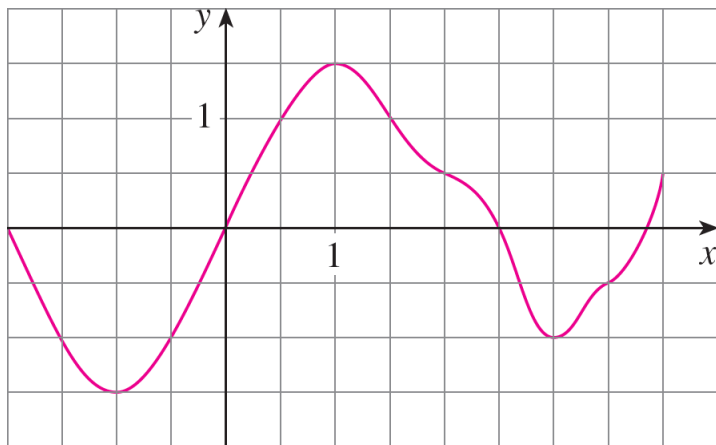**Exercise 1**   The graph of g is shown. Estimate $\int_{-2}^{4} g(x)\,dx$ with six subintervals using (a) right endpoints, (b) left endpoints, and (c) midpoints.


Exercise 2   The table gives the values of a function obtained from an experiment. Use them to estimate $\int_{3}^{9} f(x)\,dx$ using three equal subintervals with (a) right endpoints, (b) left endpoints, and (c) midpoints. If the function is known to be an increasing function, can you say whether your estimates are less than or greater than the exact value of the integral?

x	3	4	5	6	7	8	9
$f(x)$	−3.4	−2.1	−0.6	0.3	0.9	1.4	1.8

Exercise 3   Evaluate the integral.

$$\int_1^4 (x^2 - 4x + 2)\, dx$$

Exercise 4   The graph of f is shown. Evaluate each integral by interpreting it in terms of areas.
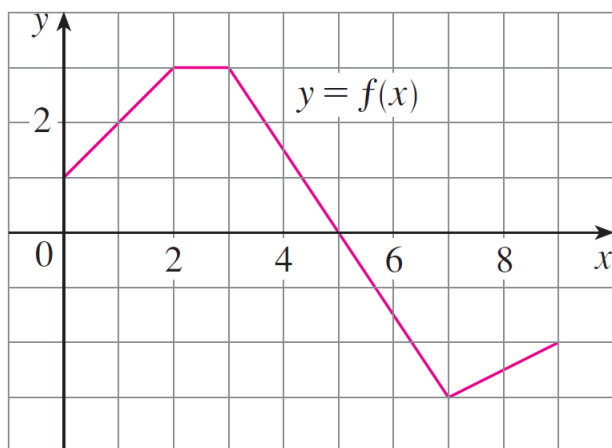
(a) $\int_0^2 f(x)\, dx$

(b) $\int_2^7 f(x)\, dx$

(c) $\int_3^7 f(x)\, dx$

(d) $\int_4^4 f(x)\, dx$

(e) $\int_3^1 f(x)\, dx$

(f) $\int_0^9 |f(x)|\, dx$

(g)   If f is a velocity function, what is the displacement of the moving body at $x = 5$?