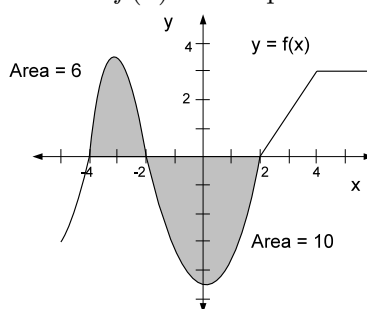


4. [12 points]

a. [5 points] If the average value of a continuous function  $g$  on  $[1, 8]$  is 3, find

$$\int_{-1}^6 3(g(x+2)) + 5 \, dx.$$

Use the following graph of a function  $f(x)$  to compute the quantities in parts (b)–(d) below.

b. [2 points]  $\int_{-4}^2 f(x) \, dx$

c. [3 points] The area between the graph of  $f(x)$  and the  $x$ -axis for  $-4 \leq x \leq 5$  if the units on the axes are centimeters.

d. [2 points]  $\int_3^5 f'(x) \, dx$