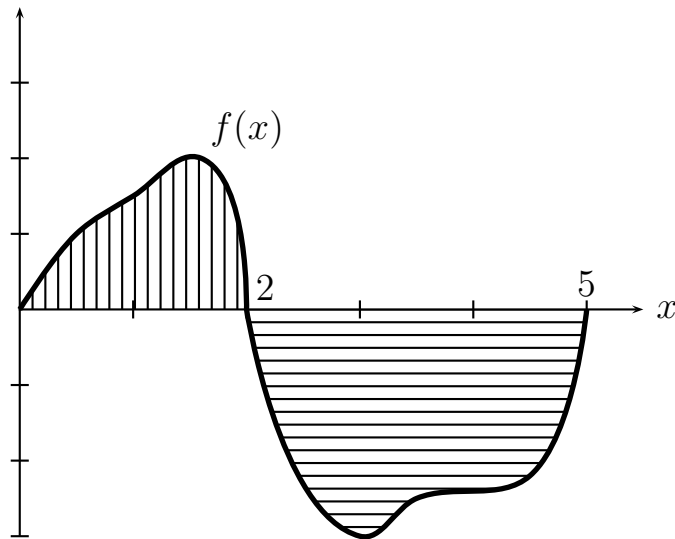


7. [10 points] Suppose that  $f$  is an even function. A portion of  $f$  is graphed below.



The area of the shaded region between  $x = 0$  and  $x = 2$  (with vertical stripes) is 3 units, and the area of the shaded region between  $x = 2$  and  $x = 5$  (with horizontal stripes) is 8 units. Find exact values for each of the following integrals. If it is not possible to find the exact value, write “insufficient information”.

- a. [2 points]

$$\int_{-2}^2 f(x) dx$$

- b. [2 points]

$$\int_0^5 |f(x)| dx$$

- c. [2 points]

$$\int_0^1 f(2t) dt$$

- d. [2 points]

$$\int_5^8 f(t-3) dt$$

- e. [2 points]

$$\int_5^2 9f(z) dz$$