



Exercise set (4.5):

Quick check exercise 4.5: 3 and 4

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Exercise set 4.5:

13, 14, 15(a,b), 16(a), 18, 21, 22,

23, 24, 27, 33, 34. p. 240 - 241

4. Suppose that $g(x)$ is a function for which

$$\int_{-2}^1 g(x) dx = 5 \quad \text{and} \quad \int_1^2 g(x) dx = -2$$

(a) $\int_1^2 5g(x) dx$ _____

(b) $\int_{-2}^2 g(x) dx$ _____

(c) $\int_1^1 [g(x)]^2 dx$ _____

(d) $\int_2^{-2} 4g(x) dx$ _____

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



$$c) \int^3 (1 - \frac{1}{x}) dx$$

$$d) \int_0^3 (1 - \frac{1}{2}x) dx$$

16. (a) $\int_{-10}^{-5} 6 dx$

18. In each part, evaluate the integral, given that

$$f(x) = \begin{cases} 2x, & x \leq 1 \\ 2, & x > 1 \end{cases}$$

(a) $\int_0^1 f(x) dx$

(b) $\int_{-1}^1 f(x) dx$

(c) $\int_1^{10} f(x) dx$ _____

(d) $\int_{1/2}^5 f(x) dx$ _____

21. Find $\int_{-1}^2 [f(x) + 2g(x)] dx$ if

$$\int_{-1}^2 f(x) dx = 5 \quad \text{and} \quad \int_{-1}^2 g(x) dx = -3$$

22. Find $\int_1^4 [3f(x) - g(x)] dx$ if

$$\int_1^4 f(x) dx = 2 \quad \text{and} \quad \int_1^4 g(x) dx = 10$$

33–34 Use Theorem 4.5.6 to determine whether the value of the integral is positive or negative. ■

(a) $\int_2^3 \frac{\sqrt{x}}{1-x} dx$

34. (a) $\int_{-3}^{-1} \frac{x^4}{\sqrt{3-x}} dx$ _____

(b) $\int_{-2}^2 \frac{x^3 - 9}{|x| + 1} dx$ _____