

Use the given values and rules for integrals to solve each integral.

1. $\int_1^3 f(x) dx = 4$; $\int_1^7 f(x) dx = -3$; $\int_1^3 g(x) dx = -1$; $\int_1^7 g(x) dx = 7$; Find the following integrals:

a. $\int_7^1 f(x) dx$

b. $\int_1^3 f(x) + g(x) dx$

c. $\int_1^1 f(x) dx$

d. $\int_3^7 g(x) dx$

e. $\int_7^3 (f(x) - g(x)) dx$

2. $\int_5^{-1} f(x) dx = 3$; $\int_2^5 f(x) dx = -4$; $\int_{-1}^1 f(x) dx = 1$; $\int_1^{-1} h(x) dx = -2$; $\int_{-1}^5 h(x) dx = 3$; Find the following integrals:

a. $\int_{-1}^2 f(x) dx$

b. $\int_1^2 f(x) dx$

c. $\int_{-1}^1 (h(x) - f(x)) dx$

d. $\int_1^5 h(x) dx$

e. $\int_{-1}^5 (f(x) + h(x)) dx$