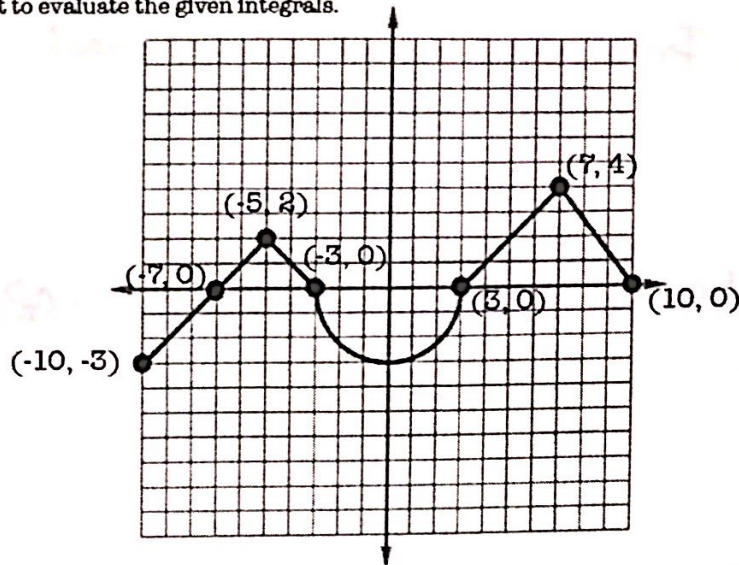


The graph that is given is made of straight lines and a semicircle. Use it to evaluate the given integrals.



1) $\int_{-7}^{-3} f(x) dx =$	2) $\int_{-10}^{-7} f(x) dx =$	3) $\int_8^{10} f(x) dx =$
4) $\int_{10}^3 f(x) dx =$	5) $\int_{-3}^8 f(x) dx =$	6) $\int_{-10}^{10} f(x) dx =$
7) $\int_{-3}^{-10} f(x) dx =$	8) $\int_{-10}^{-3} f(x) + 2 dx =$	9) $2 \int_8^{10} f(x) dx =$
10) $\left \int_{-10}^{-3} f(x) dx \right =$	11) $\int_0^7 f(x) dx =$	12) $-\int_{-7}^7 f(x) dx =$

13) Given $g(x) = \int_{-10}^x f(x) dx$, find...

a) $g(0)$ b) $g(7)$ c) $g'(-5)$ d) $g''(-4)$

14) Where is $g(x)$ increasing and decreasing?

15) Where is $g(x)$ concave up and concave down?

16) What is the absolute maximum value of $g(x)$ on $[-10, 10]$?

17) What is the absolute minimum value of $g(x)$ on $[-10, 10]$?

18) Suppose that f and h are continuous functions and that $\int_1^9 f(x) dx = -1$, $\int_7^9 f(x) dx = 5$, and $\int_7^9 h(x) dx = 4$. Find each value below.

a) $\int_1^9 -2f(x) dx$

b) $\int_7^9 [f(x) + h(x)] dx$

c) $\int_7^9 [2f(x) - 3h(x)] dx$

d) $\int_1^7 f(x) dx$

e) $\int_9^1 [f(x) + 3] dx$

f) $\int_9^7 4h(x) dx$