

WARM UP

If you know $\int_2^6 f(x) dx = 10$ and

$\int_2^6 g(x) dx = -2$, determine the value of

(a) $\int_2^6 [f(x) - g(x)] dx$ and (b) $\int_2^6 [3f(x) + g(x)] dx$.

PROBLEM

Draw a picture and use **geometry**
to determine the following:

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

$$(b) \int_0^3 \sqrt{9 - x^2} dx$$

PROBLEM

Determine the value of each, based on the graph of $y = f(x)$ provided. The graph contains only line segments and a semicircle.

(a) $\int_0^2 f(x) dx$

(b) $\int_{-4}^6 f(x) dx$

(c) $\int_{-4}^6 |f(x)| dx$

