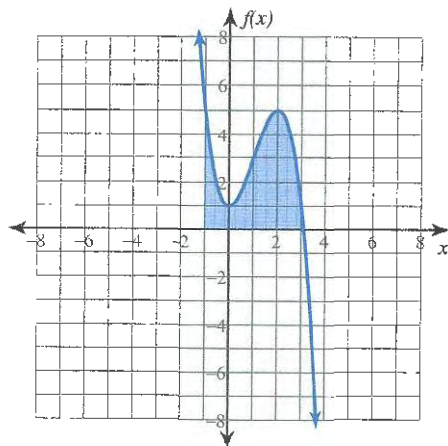


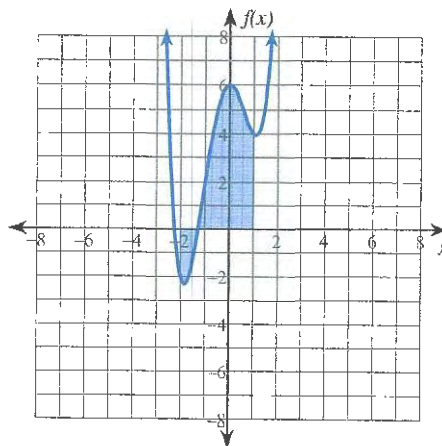
## Fundamental Theorem of Calculus

Evaluate each definite integral.

1)  $\int_{-1}^3 (-x^3 + 3x^2 + 1) dx$



2)  $\int_{-2}^1 (x^4 + x^3 - 4x^2 + 6) dx$



3)  $\int_1^3 (2x^2 - 12x + 13) dx$

4)  $\int_0^3 (-x^3 + 3x^2 - 2) dx$

5)  $\int_{-1}^0 (x^5 - 4x^3 + 4x + 4) dx$

6)  $\int_{-3}^0 4x^{\frac{1}{3}} dx$

$$\textcircled{7} \int_0^3 f(x) dx, f(x) = \begin{cases} \frac{1}{2}x - 1, & x \leq 2 \\ x^2 - 6x + 8, & x > 2 \end{cases}$$