

Key

Fundamental Theorem of Calculus Part 2

For each problem, find $F'(x)$.

1. $F(x) = \int_{-4}^x (t-1) dt$

$$\boxed{x-1}$$

2. $F(x) = \int_{-3}^x (t^2 + 2t + 3) dt$

$$\boxed{x^2 + 2x + 3}$$

3. $F(x) = \int_{-1}^x (-2t + 2) dt$

$$\boxed{-2x + 2}$$

4. $F(x) = \int_4^x (-t^3 + 11t^2 - 39t + 44) dt$

$$\boxed{-x^3 + 11x^2 - 39x + 44}$$

5. $F(x) = \int_2^x \frac{1}{t^3} dt$

$$\boxed{\frac{1}{x^3}}$$

6. $F(x) = \int_0^x -5t dt$

$$\boxed{-5x}$$