

# 5.1 Antiderivatives and Indefinite Integration

Name:

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**P 11.** Find the indefinite integral.

$$\int x + 7 \, dx$$

**P 12.** Find the indefinite integral.

$$\int 8x^3 - 9x^2 + 4 \, dx$$

**P 14.** Find the indefinite integral.

$$\int \sqrt{x} + \frac{1}{2\sqrt{x}} \, dx$$

**P 16.** Find the indefinite integral.

$$\int \sqrt[4]{x^3} + 1 \, dx$$

**P 18.** Find the indefinite integral.

$$\int \frac{3}{x^7} \, dx$$

**P 20.** Find the indefinite integral.

$$\int \frac{x^4 - 3x^2 + 5}{x^4} \, dx$$

**P 22.** Find the indefinite integral.

$$\int (4t^2 + 3)^2 dt$$

**P 24.** Find the indefinite integral.

$$\int \theta^2 + \sec^2 \theta d\theta$$

**P 26.** Find the indefinite integral.

$$\int \sec y(\tan y - \sec y) dy$$

**P 28.** Find the indefinite integral.

$$\int 4x - \csc^2 x \, dx$$

**P 30.** Find the indefinite integral.

$$\int \cos x + 3^x \, dx$$