

Antiderivatives/Integrations Homework

Date _____ Period _____

Evaluate each indefinite integral.

1) $\int (12x^2 + x^{-2} - 6x^{-4}) dx$

$$4x^3 - \frac{1}{x} + \frac{2}{x^3} + C$$

2) $\int (6x - 12x^{-4} - 16x^{-5}) dx$

$$3x^2 + \frac{4}{x^3} + \frac{4}{x^4} + C$$

3) $\int (12x^3 - 4x^{-5}) dx$

$$3x^4 + \frac{1}{x^4} + C$$

4) $\int \frac{4x^5 - 4x - 3}{x^4} dx$

$$2x^2 + \frac{2}{x^2} + \frac{1}{x^3} + C$$

5) $\int \left(18x^5 - \frac{20\sqrt[3]{x}}{3} \right) dx$

$$3x^6 - 5x^{\frac{4}{3}} + C$$

6) $\int \left(-\frac{6}{x^3} - \frac{20}{x^5} \right) dx$

$$\frac{3}{x^2} + \frac{5}{x^4} + C$$

7) $\int \frac{15x^5 \sqrt[4]{x} - 32}{4x^5} dx$

$$3x^{\frac{5}{4}} + \frac{2}{x^4} + C$$

8) $\int \left(5x^4 - 5 + \frac{15}{x^4} \right) dx$

$$x^5 - 5x - \frac{5}{x^3} + C$$

9) $\int 4\sin x dx$

$$-4\cos x + C$$

10) $\int -2\sec^2 x dx$

$$-2\tan x + C$$