

## Calculus Worksheet #1 Unit 9 Selected Solutions

Integrate each of the following.

$$2. \int (2x^2 - 3x + 5) dx = \frac{2}{3}x^3 - \frac{3}{2}x^2 + 5x + C$$

$$5. \int (x - 3)^5 dx = \frac{1}{6}(x - 3)^6 + C$$

$$7. \int (2x - 7)^4 dx = \frac{1}{10}(2x - 7)^5 + C$$

$$\frac{1}{2} \int (2x - 7)^4 (2dx) =$$

$$9. \int x(x^2 + 1)^3 dx = \frac{1}{8}(x^2 + 1)^4 + C$$

$$\frac{1}{2} \int (x^2 + 1)^3 (2xdx) =$$

$$14. \int \frac{dx}{(3x - 2)^2} = -\frac{1}{3}(3x - 2)^{-1} + C$$

$$\frac{1}{3} \int (3x - 2)^{-2} (3dx) =$$

$$20. \int \frac{xdx}{\sqrt{x^2 + 9}} = \sqrt{x^2 + 9} + C$$

$$\frac{1}{2} \int (x^2 + 9)^{-\frac{1}{2}} (2xdx) = \frac{1}{2}(2)(x^2 + 9)^{\frac{1}{2}} + C$$