

## Integration Problems

Find the integrals of the following functions:

1.  $\int (x^5 - 6x + 3) dx$

2.  $\int \left( x^3 - \frac{1}{x^3} \right) dx$

3.  $\int \left( x - \frac{4}{x} + \frac{5}{x^2} \right) dx$

4.  $\int \left( \frac{1}{3x} + \frac{5}{2x^2} \right) dx$

5.  $\int \left( \sqrt[3]{x} - \frac{1}{\sqrt[3]{x}} \right) dx$

6.  $\int (3 \sin x - \sin(3x)) dx$

7.  $\int (\cos(5x) - e^{-5x}) dx$

8.  $\int \left( e^{\frac{t}{2}} + \frac{5}{t^2} \right) dt$

9.  $\int \frac{p}{2} \cos\left(\frac{p}{2}t\right) dt$

10.  $\int (x^2 - \sqrt{x} + e^{4x}) dx$