

## Basic Antidifferentiation Techniques

1.  $\int y^{-4} dy$

2.  $\int z^{-6} dz$

3.  $\int v^{\frac{2}{3}} dv$

4.  $\int y^{\frac{3}{4}} dy$

5.  $\int 4 dx$

6.  $\int dx$

7.  $\int 4 \cos y dy$

8.  $\int x^{-\frac{3}{2}} dx$

9.  $\int t^{-\frac{5}{4}} dt$

10.  $\int \sqrt[3]{t} dt$

11.  $\int (6 \sec^2 y + \sin y) dy$

12.  $\int (8x^3 - 6x^2 + 4x - 1) dx$

13.  $\int \frac{dz}{\sqrt[5]{z}}$

14.  $\int \left( \frac{9}{y^4} - \frac{8}{y^3} \right) dy$

15.  $\int (5 \sin x + \csc x \cot x) dx$

16.  $\int (6x^2 + 6x - 2) dx$

17.  $\int \frac{dy}{\cos^2 y}$

18.  $\int \sqrt{z}(1 - z^2) dz$

19.  $\int \left( 2y - \frac{3}{y^2} \right) dy$

20.  $\int \frac{dt}{\sec t}$

21.  $\int \frac{1+x}{x^3} dx$

22.  $\int (2\sqrt[3]{y} - \sqrt{y}) dy$

23.  $\int 4e^{4x} dx$

24.  $\int \left( t^4 - \frac{1}{t^4} + \sqrt[4]{t} \right) dt$

25.  $\int \frac{\sin 2\theta}{\sin \theta} d\theta$

26.  $\int \frac{1+u}{\sqrt{u}} du$

27.  $\int \frac{dy}{9y}$

28.  $\int (3 \csc^2 x + 2 \sec^2 x) dx$

29.  $\int \sqrt{x}(4x^2 + 3x) dx$

30.  $\int 5e^{\ln x^5} dx$