

MATH 229 Worksheet
Integration

Find the anti-derivatives of these functions.

1. $4x^3$

2. x^5

3. $3x^2 + 4x - 2$

4. $4x^3 + 7x^2 - 6x + 1$

5. $x^{2/3} + 3x^{1/3} + 4x^2$

6. $\cos x + 1$

7. $\frac{1}{(\cos x)^2}$

8. $\sin x - x$

9. $3t(t^3 + 1)$

10. $x\sqrt{x}$

11. $3(3x + 1)^2$

12. $3t(t^3 + 4)^2$

13. $\frac{3x^3 - 2x^2 + x}{x}$

14. $\frac{3x^{1/2} + x^3 - x^4}{x}$

15. $x^3(x + 1)(3x + 2)$

16. $x + \frac{1}{x^2}$