Homework Set 3

(sect 5.3: The Indefinite Integral)

Find the general antiderivative of the given functions.

1. $f(x) = 271$ $F(x) =$

2. $g(x) = e^x - \frac{1}{2\sqrt{x}}$ $G(x) =$

3. $h(x) = -4\sec^2 x$ $H(x) =$

4. $k(x) = 2e^x - x^3 + 1$ $K(x) =$

5. $p(x) = 3x^2 - \cos x + \frac{2}{x^2}$ $P(x) =$

Compute the given indefinite integrals.

6. $\int x^7\, dx =$

7. $\int 2^x\, dx =$

8. $\int \frac{3}{t} dt =$

9. $\int (1 - 14x)\, dx =$

10. $\int \pi\, dz =$

11. $\int \sqrt[3]{t^5}\, dt =$

12. $\int (2x^5 - 3x^3 + x^2 - 7)\, dx =$

13. $\int \frac{5}{1+s^2} ds =$

14. $\int 2\sin x\, dx =$

15. $\int \frac{1}{\sqrt{1-x^2}} dx =$