

Math 121 HW #7

Due: Apr. 25

Chapter 14.2

Find the following integrals.

1. $\int 7dx$

2. $\int \frac{1}{2x} dx$

3. $\int x^8 dx$

4. $\int 5x^{24} dx$

7. $\int \frac{2}{x^{10}} dx$

9. $\int \frac{1}{t^{7/4}} dt$

11. $\int (4 + t) dt$

12. $\int (r^3 + 2r) dr$

13. $\int (y^5 - 5y) dy$

14. $\int (5 - 2w - 6w^2) dw$

17. $\int (7 + e) dx$

22. $\int \left(\frac{e^x}{3} + 2x \right) dx$

24. $\int (0.7y^3 + 10 + 2y^{-3} dy) dy$

26. $\int dz$

28. $\int \frac{-4}{(3x)^3} dx$

34. $\int \frac{1}{12} \left(\frac{1}{3} e^x \right) dx$

37. $\int (2x^{1/2} - 3x^{1/4}) dx$

41. $\int (x^2 + 5)(x - 3) dx$

43. $\int \sqrt{x}(x + 3) dx$

44. $\int (z + 2)^2 dz$

45. $\int (3u + 2)^3 du$

49. $\int \frac{z^4 + 10z^3}{2z^2} dz$

50. $\int \frac{x^4 - 5x^2 + 2x}{5x^2} dx$

51. $\int \frac{e^x + e^{2x}}{e^x} dx$

Chapter 14.3

Find y subject to the given condition

1. $\frac{dy}{dx} = 3x - 4; \quad y(-1) = \frac{13}{2}$

2. $\frac{dy}{dx} = x^2 - x; \quad y(3) = \frac{19}{2}$

3. $y' = \frac{5}{\sqrt{x}}; \quad y(9) = 50$

4. $y' = -x^2 + 2x; \quad y(2) = 1$