

Problem Set 69

2. \$2593.74

4. $x(\ln x - 1) + C$

6. $2(x \sin x + \cos x) + C$

8. Odd

10.
$$\frac{e^{\cos(3x)}[-3x \sin(3x) + 1]}{x^3 + 1} - \frac{3x^3 e^{\cos(3x)}}{(x^3 + 1)^2}$$

12.
$$2\sqrt{\sin x + 1} - \frac{1}{4}x^{-4} + \frac{1}{2}\arcsin x^2 + C$$

14. 0.859; they are the same

16. $\frac{9}{2}$ units²

18. $A = \int_{-2}^0 y(y - 1)(y + 2) dy$

20. $\frac{15}{4}$

22a. 10

b. 3

24. B