

Problem Set 84

2. 12 joules

4. 50π joules

6. $x^x(1 + \ln x)$

8. $\frac{x^2\sqrt{x^2+1}}{(x-1)^4} \left(\frac{2}{x} + \frac{x}{x^2+1} - \frac{4}{x-1} \right)$

10. $x - \frac{1}{2}\sin(2x) + C$

12. $-2\cos x + \frac{2}{3}\cos^3 x + C$

14. $-\frac{2}{3}(1 - \sin x)^{3/2} + C$

16. $\frac{3}{2}$

18. $\frac{1}{\ln 100}$

20. e^2 units²

22. Even

24. B