

Problem Set 79

2. $v(3) = -25$
 $x(3) = -20$

4. 2,000 joules

6. 1

8. ∞

10. does not exist

12. $-\cos x + \frac{1}{3}\cos^3 x + C$

14. $x \log x - \frac{x}{\ln 10} + \frac{43^x}{\ln 43} + C$

16. E

18. $y = -12x - 7$

20a. $\int_{-3}^2 |x^2 + x - 2| dx$

b. 8.167 units²

22. $\sec x(1 + \sec x + x \tan x) + \frac{2x}{1+x^4}$
 $+ e^x \csc(2x)[-2 \cot(2x) + 1]$

24. B