

Problem Set 48


2. $\frac{d(SA)}{dt} = \frac{4}{7} \frac{\text{cm}^2}{\text{sec}}$

4. $-\csc^2 x$

6. $\frac{dy}{dx} = e^x \csc x (1 - \cot x)$

8. $A = (e^2 - \sqrt{e} + \ln 4) \text{ units}^2$
 $\approx 7.127 \text{ units}^2$

10. $A = \ln 3 \text{ units}^2$
 $\approx 1.099 \text{ units}^2$

12. minimum at $x = -\frac{b}{2}$ 

14. $\frac{dy}{dx} = 8x \cos(x^2)$

16. $v(3) = 21$

18. $\frac{1}{2}x^2 + x + \ln|x| + C$

20. $y = \frac{\ln x}{\ln 2} \approx 1.443 \ln x$

22. $(-1, -1)$

24. "x is less than 2 away from $\frac{3}{2}$ "

