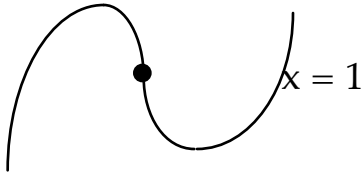


Problem Set 51

2.



4a. $x = \frac{1}{2}$

b. $\left(\frac{1}{2}, \infty\right)$

6. $\sin^6 t + C$

8. $e^{2x^2} + C$

10. $e^{4\sin x} + C$

12. $y' = e^x(x^2 - 1)^{29}(x^2 + 60x - 1)$

14. $f'(x) = \frac{(x^2 + 1)\cos x - 20x \sin x}{(x^2 + 1)^{11}}$

16. $y' = e^{\tan(\sin x)} \sec^2(\sin x) \cos x$

18. $A = 1 + \ln 4 \text{ units}^2$
 $\approx 2.386 \text{ units}^2$

20a. $\int_0^5 x \, dx$

b. $\frac{25}{2}$

22. $x \approx 1.935$

24. C