

Calculus — Problem Set 25

2. 250 NLK^{-1} newtons per square meter

4. $14x^{13}$

6. $\frac{3\sqrt{x}}{2}$

8. $x^4 - 10x^{-3} + 24x^3$

10. $s'(t) = v_o + at$

12. $\theta = \frac{\pi}{3}, \pi, \frac{5\pi}{3}$

14. (a) no real zeros
(b) Since both solutions are complex, the polynomial has no real zeros.

16. f is never increasing

18. 1

20. $-\csc^2 x$

22. 40

24. C

Calculus — Problem Set 26

2. 6:12:45 a.m.

4. $f'(t) = -2\sqrt{2} t^{-3} - 9t^{-4}$

6. $e^x + \frac{1}{x} - \cos x - \sin x$

8. $2\cos x + 14e^x + 14x^{-2}$

10. $3e^x + 4\sin x - \frac{1}{4x}$

12. $y_1 = -2 + \sqrt{(x^2 - 2x)}$

$y_2 = -2 - \sqrt{(x^2 - 2x)}$

Vertices: (0, -2), (2, -2)

14. 0

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

18.

20. If the function is continuous at $x = a$, then the function has a derivative at $x = a$.

22. $x = 4.8$
 $y = 3.6, z = 6.4$

24. $2\sqrt{66} \text{ units}^2$