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# Answers for even numbered review problems

(9th edition)

Chapter 1.

2. (a) \$45. (b) a \$1 drop. (c) In 9 months. (d) The price approaches \$40.

4. (a) $x^2 - 5x + 10$. (c) $2x + 1$.

6. (a) $Q[p(t)] = \sqrt{23.4 + 0.1t^2}$. (b) $\sqrt{24.3} \approx 4.93$ units. (c) 4 years from now.

10. (a) $y = 5x - 4$. (d) $2x + y = 14$. (e) $3x + 5y = 12$.

14. (a) $C = 400t + 3200$. (b) 5200.

24. $C = 4(3000 - x) + 5\sqrt{900^2 + x^2}$.

26. \$8000.

48. (a) $A = 6$ (b) $A = 2$.

Chapter 2.

18. (b) $-\dfrac{25}{16}$ (c) 0.

20. (a) $3(30x + 11)$.

22. (a) $120x^3 - 24x + 10 + \dfrac{2}{x^3}$
(c) $24(3x^2 + 2)^2(21x^2 + 2)$
(e) $\dfrac{2(x - 5)}{(x + 1)^4}$.

24. (b) $-28$ (c) $-\dfrac{5}{9}$.

28. (a) The velocity is $v(t) = 6(t^2 - 7t + 10)$. The object advances when $1 < t < 2$ and $5 < t < 6$ and retreats when $2 < t < 5$. The acceleration is $a(t) = 6(2t - 7)$. The object accelerates when $\dfrac{7}{2} < t < 6$ and decelerates when $1 < t < \dfrac{7}{2}$.
(b) 49.

Chapter 3.

28. $f(2) = 10$ is the absolute minimum and there is no absolute maximum.