

## College Algebra Even Answers

**PS 35:**    2. 500 lbs.            4. Multiply by 9            6.  $\frac{17}{12}$             8.  $\frac{11}{15}$             10. approx  $Y = -50B + 5050$

12. C    14.  $y = \frac{6}{5}x - \frac{8}{5}$             16.  $-\frac{4}{5}$             18. (a) x axis – no, y axis – yes, origin – no,

(b) x axis – yes, y axis – no, origin – no    20.  $y = (x - 3)^3$     22. a]  $\frac{4}{3}$     b]  $-\frac{3}{2}$     c] 27

24.  $-\frac{\sqrt{3}}{3}$             26.  $\frac{-h}{x(x+h)}$             28. proof            30. A

**PS 36:**    2.  $N_r = 10, N_w = 100, N_b = 50$     4.  $\frac{mp}{m+2p} \frac{mi}{hr}$     6.  $-\frac{12}{7}$             8.  $\frac{37}{20}$

10.  $f(x) = \sqrt{x}, g(x) = x - 1$     12.  $y = 3x + 7$     14.  $\frac{2\sqrt{10}}{7}$

16.  $y = \sqrt{-x}$             18.  $4.79 \angle 281.36^\circ$             20. (a)  $3\sqrt{3}$     (b)  $-\frac{11}{2}$     (c)  $\frac{1}{9}$

22. a] Function, not 1 to 1    b] Function, not 1 to 1    c] Not a function    d] Function, not 1 to 1

24. a]  $1 - \frac{\sqrt{2}}{2}$     b]  $\frac{-1 + \sqrt{2}}{2}$             26. a]  $\frac{1}{18}$     b]  $\frac{1}{9}$     c]  $\frac{9}{8}$     28. Proof            30. C

**PS 37:**    2. \$384            4. \$4000            6.  $y = -\frac{7}{5}x - \frac{6}{5}$             8.  $-\frac{96}{35}$

10. approx  $O = 6.6711I - 106.7$     12. A    14.  $y = \frac{1}{4}x - \frac{1}{6}$     16. (a) x axis – no, y axis – no, origin – yes

(b) x axis – yes, y axis – no, origin – no    18.  $y = 4^x + 3$

20. a] Domain =  $\{x \in \mathfrak{R} \mid -3 \leq x \leq 5\}$ ; Range =  $\{y \in \mathfrak{R} \mid 1 \leq y \leq 7\}$

b] Domain =  $\{x \in \mathfrak{R} \mid -2 \leq x \leq 2\}$ ; Range =  $\{y \in \mathfrak{R} \mid -8 \leq y \leq 8\}$

22.a] 2    b] 3    c] 4            24. 2            26.  $2x + h$             28.  $4572\pi \text{ cm}^3$             30. A

**PS 38:**    2.  $\frac{RT + 100}{T + P} \text{ mi/hr}$             4. 4 liters of 90%, 16 liters of 75%    6. 120            8. 243

10.  $y = 8x + \frac{5}{2}$             12.  $-\frac{5}{4}$             14.  $f(x) = x^3, g(x) = 2x + 3$             16. 32 sq cm.

18.  $y = 3^{-x}$             20.  $19.89 \angle 327.02^\circ$             22.  $\{x \in \mathfrak{R} \mid x \geq -100, x \neq -5, -2\}$             24. a] x    b] x

26.  $g = \frac{2(x - x_0 - v_0 t)}{t^2}$             28. proof            30. A

**PS 39:**      2] 31.42 ft      4] 210      6]  $\frac{2y}{s+10}$  yd/sec      8]  $x - 2y + 8 = 0$

10]  $\frac{\sqrt{3}+1}{2}$       12]  $\frac{1}{2}$       14]  $y = -\frac{9}{4}x + \frac{1}{8}$       16]  $\frac{14}{3}$

18] approx  $S = -5.71P + 334.2$       20] NO, isosceles trapezoid      22a]  $-45^\circ$       b]  $\frac{2\sqrt{6}}{5}$

24] (a) 3 (b) -3 (c)  $\sqrt[3]{9}$       26a] x      b] x      28]  $2052\pi \text{ m}^2$       30] B

**PS 40:**      2] 17 mph      4] 10 lbs.      6] 1,860,480      8] 2

10] 9      12]  $x + 3y - 9 = 0$       14]  $\frac{\sqrt{3}}{4}$       16] 1

18]  $9x + y - 7 = 0$       20]  $f(x) = x + 1, g(x) = x^2$       22]  $y = -x^2$

24]  $\{x \in \mathfrak{R} \mid x > 0, x \neq 1\}$       26]  $6x + 3h - 4$       28]  $\frac{2}{3}$       30] B

**PS 41:**      2] 18 mph      4] 9:00 pm      6]  $\frac{6 - 2\sqrt{3}}{3}$       8a] 5040      b] 154,440

10] No Solution      12] 8      14]  $x + 3y - 7 = 0$       16]  $x^2 - \frac{1}{6}x - \frac{1}{3} = 0$

18]  $-\frac{3}{4}$       20]  $H = S$       22] 6 cm

24]  $y = \frac{1}{x+3}$       26]  $6.04 \angle 153.3^\circ$       28]  $\frac{-1}{x(x+h)}$       30] A

**PS 42:**      2] B= 20 mph, C = 5mph      4] 16 hr.      6] \$300      8] graph

10]  $\sqrt{2}$       12] 151,200      14] 49      16] No

18]  $\frac{x}{\frac{1}{2}} + \frac{y}{-\frac{3}{5}} = 1$       20]  $2x + y - 1 = 0$       22] A

24a]  $-60^\circ$       b]  $\frac{\sqrt{7}}{4}$       26]  $g(x) = |x - 2| + 3$       28] proof      30] D