PS 31: 2] a) A rect is a parallelogram with four angles of equal measure.
b) A Rhombus is a parallelogram with 4 sides of equal length.
c) A square is a rhombus with 4 angles of equal measure.

4] $\frac{1800}{1000^2} = .0018\,\text{km}^2$ 6] 7(N-5) 8] 7N-51 10] 38 12] $\frac{1}{16}$

14] 1 16] 640 18] $\frac{-26}{5}$ 20] 1020 22] -12 24] $3mp^{-2}x - 5mx$

26] $1 - 5y^4$ 28] 52 30] 870 cm^3

PS 32: 2] a. Natural counting numbers. b. Whole numbers c. Integers 4] $\frac{57}{3^2} \approx 6.333\ \text{yd}^2$

6] 19 8] 0.05 10] -64 12] 36 14] 8 16] 40 18] $\frac{4}{3}$

20] $-7k^2p^{-4}y$ 22] $3 - 12x^3y^{-5}$ 24] 132 26] $\frac{-27}{7}$ 28] -2.03 30] $478in^2$

PS 33: 2] The angles opposite the sides of equal length have equal measures

4] $\frac{28000}{5280^2} \approx .001\ \text{mi}^2$ 6] 3 8] $2 \cdot 2 \cdot 3 \cdot 5$ 10] 51.25 12] $\frac{-1}{27}$ 14] 84 16] $\frac{28}{5}$

18] -279 20] $\frac{9}{2}$ 22] $2x^{-4} + 2y^5$ 24] 2 26] 27 28] $156\pi in^2$ 30] x=70, y=40

PS 34: 2] π 4] $\frac{3200(2.54)^2}{100^2} \approx 2.065\ \text{m}^2$ 6] 6 8] $2 \cdot 3 \cdot 3 \cdot 5$

10] 42 12] 25 14] $\frac{1}{3}$ 16] -1 18] 2 20] $2ab^2c$ 22] 11xy

24] $1 - 2x^5y^{12}$ 26] -4 28] -35 30] $\text{Vol} = 240\ \text{cm}^3$

PS 35: 2] $\frac{6(12)(2.54)}{100} = 1.8288\ \text{m}$ 4] 60 cm^2 6] 7 8] $2 \cdot 3 \cdot 7 \cdot 7$ 10] $\frac{1}{16}$

12] 10 14] $\frac{1}{3}$ 16] $\frac{-13}{4}$ 18] 3 is a root & -1 is not a root of the equation

20] $2a^2x^2m\left(3am^4 + a^2m^4x^3 + 2\right)$ 22] 1 - 4x 24] $x^5 - 3x^7y^{-1}$ 26]1

28] $6 + 2\pi \approx 12.283\ \text{m}^2$ 30] 664 in^2

PS 36:

2] The sides opposite the angles of equal measure have equal lengths.

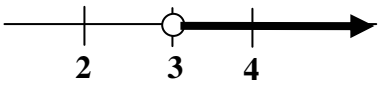
4] $36(3)^2(12)^2 = 46656\ \text{in}^2$ 6] 7 8] $2 \cdot 5 \cdot 5 \cdot 5$ 10] -4 12] 17

14] 7 16] $\frac{-9}{5}$ 18] $3ax^2y^4(ax^2y^2+3-2ax^2yz)$ 20] 3x - 1 22] $3x^5y^{-2}-9y^7$

24] -15 26] -129 28] 120 m 30] 8

PS 37:

2]8 4] $200(5280)^2(12)^2 = 802{,}897{,}920{,}000\ \text{in}^2$ 6]



8] $2 \cdot 2 \cdot 2 \cdot 3 \cdot 3 \cdot 5$ 10] -4 12]10 14]10 16]$\frac{11}{7}$

18] $3ax^2y^2(4ax^3y^5-1)$ 20] x+3 22] $6y^2-10x^2$ 24] $\frac{ab^4}{c^2k}-\frac{2axb^2}{c^2}$

26] 24 28] $-\frac{3}{4}$ 30] 736m^3

PS 38:

2]-10 4] a negative # 6] (a.) 6 cm (b.) $1212\pi \approx 37.699$ cm

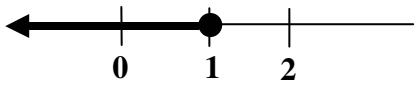
8] $x \le -2$ 10] $-\frac{1}{25}$ 12] 2 14] 4 16] 7

18] $6a^2xm^5(m-3a^3x^2)$ 20] x - 5 22] $12z-21x^2y^{-3}$ 24] -72 26] -49

28] $96+50\pi \approx 253.08\text{m}^2$ 30] 912 ft^2

PS 39:

2] 56 4] -1 6] $180\ \text{cm}^2$ 8]



10] B&C 12] -9 14] $\frac{1}{2}$ 16] $\frac{10}{3}$

18] $3xy^3z^5(x-3y^3z)$ 20] x+1 22] -3x 24] $4ax-\frac{8x^3}{a^2}$ 26] -3

28] 3 30] 630 in^3

PS 40:

2] 980 4] -1 6] $x \le 1$ or $x \ge 1$ 8] $\frac{1}{27}$ 10] 0.04515

12] $-\frac{11}{2}$ 14] $\frac{5}{4}$ 16] $2a^2x(2y^4p-3x^3)$ 18] 1 - 6x 20] x^2y^{-2} or $\frac{x^2}{y^2}$

22] $bm^{-5}-4ab^{-5}$ or $\frac{b}{m^5}-\frac{4a}{b^5}$ 24]$-x^3y^2+5x^{-3}y^{-2}$ or $-x^3y^2+\frac{5}{x^3y^2}$ 26] 13 28] $-\frac{34}{7}$

30] x=55, y=70