

2, 4, 9, 10

$$2. (-1)^1 = -1$$

$$-2^2 = (-1) 2^2 = (-1) 4 = -4$$

$$(-2)^2 = (-2)(-2) = +4$$

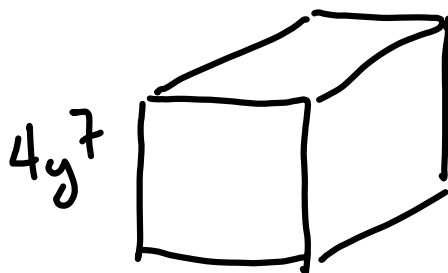
$$4. (-4)^3 (-4)^8 = (-4)^{11} = -4^{11}$$

9.

$$V = (4y^7)(4y^7)(4y^7)$$

$$\text{or} \\ (4y^7)^3$$

$$= 64 y^{21} \text{ ft}^3$$



$$V = lwh$$

$$10. \frac{(-4)^8}{(-4)^5} = (-4)^3 = -64$$

$$11. \frac{p^2 q^7}{p^1 q^1} = p^1 q^6$$

$$16. \left(\frac{3m^6}{9n^3} \right)^4 = \left(\frac{m^6}{3n^3} \right)^4 = \frac{m^{24}}{3^4 n^{12}}$$
$$\frac{m^{24}}{81 n^{12}}$$

36.

$$\left(x + \frac{2}{7}\right) \left(x - \frac{1}{7}\right)$$

$$x^2 - \frac{1}{7}x + \frac{2}{7}x - \frac{2}{49}$$

$$x^2 + \frac{1}{7}x - \frac{2}{49}$$

26.

Subtract $(5y^2 - 3y - 7)$ from the sum of $(2y^2 + 8)$ and $(2y + 6)$.

$$\left[(2y^2 + 8) + (2y + 6)\right] - (5y^2 - 3y - 7)$$

$$\begin{array}{r} \underline{2y^2} + \underline{2y} + \underline{14} \end{array} \quad \begin{array}{r} - \underline{5y^2} + \underline{3y} + \underline{7} \end{array}$$

$$-3y^2 + 5y + 21$$

$$19. \quad \frac{2}{5}x^2 - \frac{1}{2}x^3 + x^2 - \frac{1}{3}x^3 + 7$$

$$\frac{3 \cdot 1}{3 \cdot 2}x^3 - \frac{2 \cdot 1}{2 \cdot 3}x^3 + \frac{2}{5}x^2 + \frac{1}{5}x^2 + 7$$

$$- \frac{3}{6}x^3 - \frac{2}{6}x^3 + \frac{2}{5}x^2 + \frac{1}{5}x^2 + 7$$

$$- \frac{1}{2}x^3 + \frac{3}{5}x^2 + 7$$

$$22. \quad (5x^2 + 7) - (7x^2 - 11)$$

$$\frac{5x^2 + 7}{\quad} - \frac{7x^2 - 11}{\quad}$$

$$-2x^2 + 18$$

$$30. (9r^2s - 4rs - 5 + 3r^2s^2) - (12sr^2 - 11 - 11r^2s^2)$$

$$\begin{aligned} & \underline{9r^2s} - \underline{4rs} - \underline{5} + \underline{3r^2s^2} - \underline{12r^2s} + \underline{11} + \underline{11r^2s^2} \\ & - 3r^2s - 4rs + 6 + 14r^2s^2 \end{aligned}$$

$$38. (7y - 9)^2 = \overbrace{(7y - 9)}^{\quad} \underbrace{(7y - 9)}_{\quad}$$

$$49y^2 - \underline{63y} - 63y + 81$$

$$49y^2 - 126y + 81$$

40. $(2a - 9)(8a^2 + 6a - 2)$

$$16a^3 + 12a^2 - 4a$$

$$- 72a^2 - 54a + 18$$

$$16a^3 - 60a^2 - 58a + 18$$

34. $\frac{1}{2}x^2 \left(\frac{8}{1}x^2 - \frac{4}{1}x + \frac{1}{1} \right)$

$$4x^4 - 2x^3 + \frac{1}{2}x^2$$

23.

Subtract $(50x^2 + 9)$ from $(63x^2 + 7)$.

$$(63x^2 + 7) - (50x^2 + 9)$$

$$\begin{array}{r} 63x^2 + 7 \\ \underline{\quad\quad} \end{array} \quad \begin{array}{r} - 50x^2 - 9 \\ \underline{\quad\quad} \end{array}$$

$$13x^2 - 2$$

24.

$$(7y + 6) - (-7y^2 - 9y + 6)$$

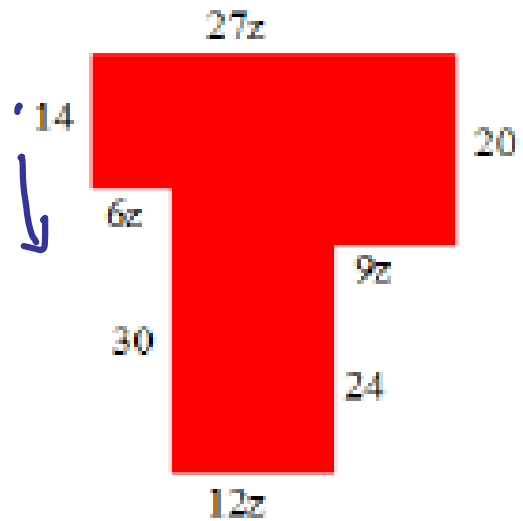
$$\begin{array}{r} 7y + 6 \\ \underline{\quad\quad} \end{array} \quad \begin{array}{r} +7y^2 + 9y - 6 \\ \underline{\quad\quad} \end{array}$$

$$7y^2 + 16y$$

$$12. \quad \frac{9b^3d^7}{45b^3d^4} = \frac{1d^3}{5} = \frac{1}{5}d^3$$

27.

$$\begin{array}{r} \underline{14} + \underline{6z} + \underline{30} + \underline{12z} \\ + \underline{24} + \underline{9z} + \underline{20} \\ + \underline{27z} \end{array}$$



$$88 + 54z$$

$$29. \quad (7x^2 + y^2 - 3) - (x^2 + y^2 - 5)$$

$$\begin{array}{r} \underline{7x^2} + \underline{y^2} - \underline{3} \quad \underline{-x^2} - \underline{y^2} + \underline{5} \end{array}$$

$$6x^2 + 2$$

$$8. \left(\frac{6xz}{y^2} \right)^3 = \frac{6^3 x^3 z^3}{y^6}$$

$$32. \quad \overbrace{2x(3x+7)}^{\text{blue}} = 6x^2 + 14x$$

$$33. \quad - \underbrace{2a^2(a^2 - 2a + 1)}_{\text{purple}} \\ - 10a^4 + 4a^3 - 10a^2$$