

$$\begin{aligned}
 1. & \quad (-3)^3 \\
 & = (-3)*(-3)*(-3) \\
 & = -27
 \end{aligned}$$

$$\begin{aligned}
 & (-6)^2 \\
 & = (-6)*(-6) \\
 & = 36
 \end{aligned}$$

$$\begin{aligned}
 2. & \quad -8^2 \\
 & = (-8)*(-8) \\
 & = 64
 \end{aligned}$$

$$\begin{aligned}
 & -(-3)^3 \\
 & = -(-3) \\
 & = 3*3*3 \\
 & = 27
 \end{aligned}$$

$$\begin{aligned}
 3. & \quad -5v^4*3v^2 \\
 & = (-5*3v^{(4+2)}) \\
 & = -15v^6
 \end{aligned}$$

$$\begin{aligned}
 4. & \quad \frac{18bcd}{48cd} \\
 & = ((18bc*\frac{d}{48}) * c) * d \\
 & = \frac{3}{8}bc^2d^2
 \end{aligned}$$

$$\begin{aligned}
 5. & \quad \frac{vw6u^4}{v^3w^5} \\
 & = ((v*(w^6))*\frac{u^4}{v^3}) * w^5 \\
 & = \frac{w^{11}u^4}{v^2}
 \end{aligned}$$

$$6. \quad \frac{a^5b^3}{ab^4}$$

$$= ((a^5) * \frac{b^3}{a} * b^4)$$

$$= a^4 b^7$$

$$7. (-2x^4y^3)^5$$

$$= -32x^{20}y^{15}$$

$$8. (-2y^2z)^3(2x^2y^3z^3)$$

$$= (((2 * (y^2)) * z))^3 * ((2x^2 * y^3) * z^3)$$

$$= ((- (2y^2 * z)))^3 * 2y^3z^3x^2$$

$$= -2^4y^9z^6x^2$$

$$9. (-4)^0$$

$$= 1$$

$$3(-\frac{8}{9})^0$$

$$= 3$$

$$10. 2^{-4}$$

$$= 1/2^4$$

$$= \frac{1}{32}$$

$$11. -6z^{-2}$$

$$= -1/6z^2$$

$$= -\frac{1}{36z}$$

$$12. x^{-5}/x^{-7}$$

$$= x^{(-5+7)}$$

$$= x^2$$

$$13. (3a^3b^{-2})^{-2}$$

$$= (3a^3 \cdot (b^{(-2)}))^{-2}$$

$$a^{-6}b^4$$

$$= \underline{\hspace{2cm}}$$

$$3^2$$

$$\begin{aligned} 14. \frac{1}{10000000} \\ &= 1 \times 10^7 \\ &= 10^7 \end{aligned}$$

$$\begin{aligned} 15. 0.0000461 \\ &= 4.61 \times 10^{-5} \end{aligned}$$

$$\begin{aligned} 16. (7 \times 10^5)(8.2 \times 10^6) \\ &= 5.74 \times 10^{12} \end{aligned}$$

$$\begin{aligned} 17. \frac{6 \times 10^9}{2 \times 10^4} \\ &= 300000 \\ &= 3.0 \times 10^5 \end{aligned}$$

$$\begin{aligned} 18. 4-8x^9-20x \\ \text{Leading coefficient} &= 8 \\ \text{Degree} &= 9 \end{aligned}$$

$$\begin{aligned} 19. 3w * 4x^4 * 4w^2 x^7 \\ &= ((2^2 * 3wx^4) \cdot 4) \cdot w^2 \cdot x^7 \\ &= ((2^4 * 3wx^4) \cdot w^2) \cdot x^7 \\ &= 48w^3 x^{11} \end{aligned}$$

$$\begin{aligned} 20. 7xy^2(9x^4+5x^3y^6-6y^6) \\ &= 63x^5y^2+35x^4y^8-42xy^8 \\ &= 35x^4y^8-42xy^8=63x^5y^2 \end{aligned}$$

$$\begin{aligned} 21. (5x+w)(7x+w) \\ &= (35x+5wx+7wx+w^2) \end{aligned}$$

$$=w^2+12wx+35x^2$$

$$\begin{aligned} 22. & (6+y)^2 \\ &= (6+y)(6+y) \\ &= y^2+12y+36 \end{aligned}$$

$$\begin{aligned} 23. & (y-4)(3y^2-7y-2) \\ &= 3y^3-19y^2+26y+8 \end{aligned}$$

$$\begin{aligned} 24. & 7v^6+6v^4+9v^2/-v^2 \\ &= -7v^4-6v^2-9 \end{aligned}$$

$$\begin{aligned} 25. & (10x^2+42x+41)/(2x+6) \\ &= 5x+6+\frac{5}{2x+6} \\ & \text{Quotient}=5x+6 \\ & \text{Remainder}= \frac{5}{2x+6} \end{aligned}$$