

12. Simplify: $(2x^3y^{-4})^4$
 a. $8x^{12}y^{-16}$ b. $\frac{16x^{12}}{y^{16}}$ c. $\frac{8x^{12}}{y^{16}}$ d. $16x^{12}y^{16}$
13. Simplify: $(-3x^2)^4$
 a. $-12x^6$ b. $-12x^8$ c. $81x^6$ d. $81x^8$
14. Simplify: $(-3)^0 + (-3)^{-1}$
 a. 3 b. $1\frac{1}{3}$ c. $-\frac{1}{3}$ d. $\frac{2}{3}$
15. Add: $(5x^3 - 4x^2 + 2x) + (-2x^3 + 4x - 7)$
 a. $3x^3 - 4x^2 + 6x - 7$ b. $3x^3 - 5x$ c. $3x^3 - 8x^2 - 5x$ d. $3x^3 - 2x^2 + 6x - 7$
16. Subtract: $(5x^4 - 3x^2 + 9) - (6x^2 + 5x^4 + 2)$
 a. $-9x^2 + 7$ b. $25x^8 - 18x^4 + 18$ c. $10x^4 + 3x^2 + 11$ d. $-x^2 + 2x^6 + 11$
17. Multiply: $(3x - 2)^2$
 a. $9x^2 + 4$ b. $9x^2 - 4$ c. $9x^2 - 6x + 4$ d. $9x^2 - 12x + 4$
18. Evaluate the polynomial for $x^2 - 5x - 7$ when $x = -2$
 a. 1 b. -13 c. 7 d. -7
19. Evaluate: $\frac{3x - 4x^2}{x^2 - 10}$ for $x = 3$
 a. $\frac{18}{5}$ b. 27 c. -153 d. 45
20. Factor out the GCF of $-12x^3y - 8x^2y^2 + 4xy^3$
 a. $-4xy(3x^2 + 2xy - y^2)$ c. $4x^3y^3(-3xy^{-2} - 2x^{-1}y^{-1} - x^{-2})$
 b. $4xy(-3xy - 2xy^4 + y^2)$ d. $-2xy(6x^2 + 4xy - 2y^2)$
21. One of the factors of $x^2 - 8x - 9$ is
 a. $(x + 9)$ b. $(x - 9)$ c. $(x - 8)$ d. $(x - 1)$
22. One of the factors of $8 + 7x^2 - 18x$ is
 a. $(7x + 4)$ b. $(x + 2)$ c. *prime* d. $(x - 2)$
23. Factor: $64x^3 - y^3$
 a. $(4x - y)^3$ c. $(4x - y)(16x^2 + 4xy + y^2)$
 b. $(8x - y)(8x + y)$ d. $(4x - y)(16x^2 - 8xy + y^2)$
24. The slope of the line $y = -\frac{2}{5}x + 7$ is
 a. $-\frac{2}{5}$ b. $\frac{5}{2}$ c. 7 d. -7
25. Which of the following lines is perpendicular to the line $y = \frac{1}{3}x - 2$?
 a. $y = -\frac{1}{3}x + 7$ b. $y = -3x + 5$ c. $y = 3x + 9$ d. $y = \frac{1}{3}x + 8$

Answer Key

1. C
2. B
3. C
4. C
5. C
6. A
7. D
8. C
9. A
10. D
11. A
12. B
13. D
14. D
15. A
16. A
17. D
18. C
19. B
20. A
21. B
22. D
23. C
24. A
25. B