

1. In the expression $18x^2 - 15xy$, variables are
 (a) x^2 and xy (b) x^2 and $-xy$ (c) x and y (d) $18x^2$ and $-15xy$
2. Which of the following is not a factor of the term $-2ab^2c^3d$?
 (a) $24ab$ (b) $3b^2c^3d$ (c) $-ab^2c^3d$ (d) $6a^2b^3c$
3. The numerical coefficients of the terms of expression, $-a.5ab^2 + \frac{7}{5}ba^2 + 11a$ are
 (a) $0.5, 7, 11$ (b) $-0.5, 7, 11$ (c) $-0.5, \frac{7}{5}, 11$ (d) $0.5, \frac{7}{5}, 11$
4. The number of terms in the expression, $\frac{-5}{7}xy + \frac{7}{9}yz + 10zx + q^2$ is
 (a) 3 (b) 4 (c) 6 (d) None of these
5. Which of the following is a binomial expression?
 (a) $-11 + 6y$ (b) $17x - 9y$ (c) $\frac{-15}{11} + p$ (d) All of these
6. Terms with same literal factors are called _____ terms.
 (a) unlike (b) monomial (c) like (d) None of these
7. On subtracting $a^2 + b^2 + 2ab$ from $b^2 - a^2$, we get
 (a) $2ab + a^2$ (b) $-a(a + b)$ (c) $-2(a^2 + ab)$ (d) $-a(a + 2b)$
8. Which of the following must be added to the sum of terms $a^2 - 1, b^2 - 1$ and $c^2 - 1$ to get $a^2 + b^2 + c^2 + 3$?
 (a) $a^2 + b^2 + c^2 + 6$ (b) 6 (c) -6 (d) $a^2 + b^2 + c^2 - 6$
9. The distance covered by a car at speed of s km/h in t hours is $s \times t$ km. If speed is increased by 5 km/h, time decreases by 1 hour, then distance covered (in km) is
 (a) $(s - 5)t$ (b) $(s - 5)(t + 1)$ (c) $(s + 5)(t - 1)$ (d) $(s - 1)(t + 5)$
10. Somesh pays ₹ $m \times n$ for m kg apples at the rate of ₹ n per kg. If rate of apples increases by ₹ 5 per kg and quantity increases by 3 kg, then amount (in ₹) he has to pay is
 (a) $(m + 5)(n - 3)$ (b) $(m - 5)(n + 3)$ (c) $(m + 5)(n + 3)$ (d) $(m + 3)(n + 5)$
11. Which of the following options is correct?

- (a) The product of two monomials is a binomial.
(b) The sum of two monomials is always a binomial.
(c) The product of two monomials can never be a constant term.
(d) None of these
12. Which of the following products results in a monomial ?
- (a) $9 \times (-14)$ (b) $(17x) \times (-8y)$ (c) Both (a) and (b) (d) Neither (a) nor (b)



13. If $\frac{-19}{24}l^2mn$ is multiplied by 60, then the result is
- (a) $95l^2mn$ (b) $-\frac{95l^2m^2n^2}{4}$ (c) $-\frac{95l^2mn}{2}$ (d) None of these
14. Find the volume of the box of dimensions $6p^2q, 3q^2r$ and $\frac{1}{9}r^2p$.
- (a) $p^3q^3r^3$ (b) $2p^3q^3r^3$ (c) $2pqr$ (d) pqr
15. Evaluate: $(2xy) \times \left(\frac{x^2y}{4}\right) \times (x^2) \times (y^2)$ when $x = 2$ and $y = -1$.
- (a) 16 (b) 8 (c) -16 (d) -8
16. Evaluate: $\frac{7}{2}p^2q(p+q)$ for $p = \frac{1}{2}$ and $q = 5$
- (a) $\frac{16}{385}$ (b) $\frac{385}{16}$ (c) $\frac{175}{8}$ (d) $\frac{35}{16}$
17. Add: $a^2(b^2 - c^2), b^2(c^2 - a^2)$ and $c^2(a^2 - b^2)$
- (a) $a^2b^2c^2$ (b) $a^2 + b^2 + c^2$ (c) 0 (d) 1
18. Evaluate: $a^2b(a - b^2) + ab^2(4ab - 2a^2) - a^3b(1 - 2b)$ for $a = 2$ and $b = -1$
- (a) -12 (b) 12 (c) 23 (d) 17
19. The product of two binomials can be a
- (a) binomial (b) trinomial (c) quadrinomial (d) All of these
20. $(2p + 3q)(3p + 4q) - (7p + 3q)(p + 2q)$ equals
- (a) $-p^2 + 6q^2$ (b) $p^2 - 6q^2$ (c) $6p^2 - q^2$ (d) $6p^2 + q^2$
21. On subtracting $(x + y)(2x - y)$ from $(x - y)(x + 2y)$, we get
- (a) $x^2 + y^2$ (b) $x^2 - 2xy + y^2$ (c) $-x^2 - y^2 + 2xy$ (d) $-x^2 - y^2$
22. Subtract: $(2x - 3)(x^2 - x + 1)$ from $(x^3 - 2x^2 + 3x - 4)(x - 1)$.
- (a) $x^4 + 5x^3 - 10x^2 + 12x + 7$ (b) $x^4 + 2x^3 - 5x^2 + 6x - 1$
(c) $x^4 - 5x^3 + 10x^2 - 12x + 7$ (d) $x^4 - 2x^3 + 5x^2 - 6x + 1$

23. Simplify: $(4p - 5q)^2 - 8p(2p - 5q)$
 (a) $125q^3$ (b) $25q^2$ (c) $25q^2p^2$ (d) $16p^2$
24. $(p + q)(p - q) + (q - r)(r + q) - (p - r)(r + p)$ equals
 (a) $p^2 + q^2 + r^2$ (b) 0 (c) $2(p^2 + q^2 + r^2)$ (d) $p^2 + q^2 + r^2 - 3$
25. Simplify: $(0.1x + 10)^2 + (0.1x - 10)^2$
 (a) $0.1x^2 + 100$ (b) $0.2x^2 + 200$ (c) $0.01x^2 + 100$ (d) $0.02x^2 + 200$
26. $(x + 1)(x - 1)(x^2 + 1)$ equals
 (a) $x^2 - 1$ (b) $x^4 - 1$ (c) $x^4 + 1$ (d) $x^3 - 1$
27. The product of a monomial and a binomial is a
 (a) monomial (b) binomial (c) trinomial (d) none of these
28. In a polynomial, the exponents of the variables are always
 (a) integers (b) positive integers
 (c) non-negative integers (d) non-positive integers
29. The sum of $-7pq$ and $2pq$ is
 (a) $-9pq$ (b) $9pq$ (c) $5pq$ (d) $-5pq$
30. Like term as $4m^3n^2$ is
 (a) $4m^2n^2$ (b) $-6m^3n^2$ (c) $6pm^3n^2$ (d) $4m^3n$
31. Sum of $a - b + ab, b + c - bc$ and $c - a - ac$ is
 (a) $2c + ab - ac - bc$ (b) $2c - ab - ac - bc$ (c) $2c + ab + ac + bc$ (d) $2c - ab + ac + bc$
32. Product of the following monomials $4p, -7q^3, -7pq$ is
 (a) $196p^2q^4$ (b) $196pq^4$ (c) $-196p^2q^4$ (d) $196p^2q^3$
33. Product of $6a^2 - 7b + 5ab$ and $2ab$ is
 (a) $12a^3b - 14ab^2 + 10ab$ (b) $12a^3b - 14ab^2 + 10a^2b^2$
 (c) $6a^2 - 7b + 7ab$ (d) $12a^2b - 7ab^2 + 10ab$
34. Which of the following are like terms?
 (a) $5xyz^2, -3xy^2z$ (b) $-5xyz^2, 7xyz^2$ (c) $5xyz^2, 5x^2yz$ (d) $5xyz^2, x^2y^2z^2$

35. $a^2 - b^2$ is equal to
 (a) $(a - b)^2$ (b) $(a - b)(a - b)$ (c) $(a + b)(a - b)$ (d) $(a + b)(a + b)$
36. The value of $(a + b)^2 + (a - b)^2$ is
 (a) $2a + 2b$ (b) $2a - 2b$ (c) $2a^2 + 2b^2$ (d) $2a^2 - 2b^2$

Codes:

- (a) If both Statement I and Statement II are true and Statement II is the correct explanation of Statement I.
 (b) If both Statement I and Statement II are true but Statement II is not the correct explanation of Statement I.
 (c) If statement I is true but Statement II is false.
 (d) If statement I is false but Statement II is true.

37. **Statement-I:** The terms of the polynomial $11x^2 - 6xy + 7y^2 + 3x - 9y - 17$ are $11x^2 + 3x, 7y^2 - 9y, -6xy$ and -17 .

Statement-II: The terms of an algebraic expression are the parts separated by '+' and '-' signs.

38. **Statement-I:** The coefficient in the term $-5mn^2$ is -5 .

Statement-II: The numerical factor of a term is called its coefficient.

39. **Statement-I:** Adding $2x^2 - 3x - 2, -3x^2 + 4x - 7$ and $7x^2 - 5x + 8$, we get $6x^2 - 4x - 1$.

Statement-II: To add algebraic expressions, we group like terms and add them to get the result.

40. **Statement-I:** The product of $15xy^2$ and $-\frac{1}{3}x^2y$ is $5x^3y$.

Statement-II: The product of two monomial is always a monomial.

41. **Statement-I:** On simplifying the algebraic expression $4st(s - t) - 6s^2(t - t^2) - 3t^2(2s^2 - s) + 2st(s - t)$, we get a monomial expression.

Statement-II: An algebraic expression containing only two terms is called a binomial.

42. **Statement-I** : $(a^2 - b^2)^2 = (a^2 + b^2)^2 - 4a^2b^2$

Statement-II : $(a + b)^2 = a^2 + 2ab + b^2$ and $(a - b)^2 = a^2 + b^2 - 2ab$

43. **Statement-I:** The value of $p^2 + q^2$, if it is given that $p + q = 12$ and $pq = 22$, is 100.

Statement-II : $a^2 + b^2 = (a + b)^2$

44. **Statement-I:** The product of $(a^3 - b^3)$ and $(a^3 + b^3)$ is a binomial.

Statement-II: Product of two binomials is always a binomial.

ANSWERS

- | | | | |
|-------|-------|-------|-------|
| 1. C | 2. D | 3. C | 4. B |
| 5. D | 6. C | 7. C | 8. B |
| 9. C | 10. D | 11. D | 12. C |
| 13. C | 14. B | 15. A | 16. B |
| 17. C | 18. A | 19. D | 20. A |
| 21. D | 22. C | 23. B | 24. B |
| 25. D | 26. B | 27. B | 28. C |
| 29. D | 30. B | 31. A | 32. A |
| 33. B | 34. B | 35. C | 36. C |
| 37. D | 38. A | 39. A | 40. D |
| 41. B | 42. A | 43. C | 44. C |