IX Class

PRACTICE MATERIAL

I. One mark questions.

1. Find the product : $(4x-3)(3x+4)$
2. Write the quotient without actual division in $(8a^3+27b^3+90ab-125)\div(2a+3b-5)$
3. The product of $16x^2+20x+25$ and the other factor is in the form of a^3-b^3. Find the second factor.
4. Find the product : $(x^3-2)(x^6+2x^3+4)$
5. Find the value of $(98)^3$ using formula.
6. If $a+b+c=9$, $ab+bc+ca=26$ find the value of $a^2+b^2+c^2$
7. Expand : $(x-2y+z)^2$
8. If $a-b=2, ab=15$ find the value of a^3-b^3
9. Find the product : $(x-\sqrt{y})(x+\sqrt{y})(x+y)$
10. If $A=4x-3, B=3x-5$ find $A\times B$
11. If $A=3x^2-4x^2+5$, $B=x^3-2x^2+3x-4$, $C=3x^3-x^2-x+2$ find $(A-B)-C$
12. If $A=5-3x^2+4x$, $B=4-5x+x^2-2x^3$ find A+B.
13. Find the value of 3.2 x^2 when x = 1.2
14. Write the additive inverse of $8x^4-8x^3+15x-10x^2+2$
15. Find the product : $(1+a)(1+b)$

II. Choose the correct answer.

16. Which of the following is not a polynomial? [ ]

    a) $2x+3$ b) x^2-x c) $x+\frac{1}{x}$ d) $x+1$

17. Polynomials do not have [ ]

    a) additive inverse b) multiplicative inverse

    c) identity in addition d) identity in multiplication

18. $\left(\sqrt{x}+\sqrt{y}\right)\left(\sqrt{x}-\sqrt{y}\right)=$ [ ]

a) $x+y$ b) $x-y$ c) $\sqrt{x}-\sqrt{y}$ d) $\sqrt{x}+\sqrt{y}$

19. $(\_\_\_\_\_)\left(x-\sqrt{xy}+y\right)=\sqrt{x^3}-\sqrt{y^3}$ [ ]

a) $\sqrt{x}+\sqrt{y}$ b) $\sqrt{x}-\sqrt{y}$ c) $\sqrt[3]{x}+\sqrt[3]{y}$ d) $\sqrt[3]{x}-\sqrt[3]{y}$

20. $A=2x-3,\ B=3+x$ then B+A = _____ [ ]

a) $2x+1$ b) $3x$ c) $3x+1$ d) $2x+3$

21. $\left(a-b\right)^2-\left(a+b\right)^2=$ [ ]

a) $2\left(a^2+b^2\right)$ b) $2\left(a^2-b^2\right)$ c) $-4ab$ d) $4ab$

22. If $x-\frac{1}{x}=3$ then $x^3-\frac{1}{x^3}=$ [ ]

a) 27 b) 9 c) 36 d) 6

23. The co-efficient of x in $\left(x+a\right)\left(x+b\right)$ is [ ]

a) a+b b) ab c) a-b d) –ab

24. Multiplicative identity of polynomials is [ ]

a) 0 b) 1 c) x d) a

25. A and B are two polynomials such that A+B=0 then B is called [ ]

a) additive identity of A b) additive inverse of A

c) multiplicative identity of A d) none

26. Subtraction of polynomials is not [ ]

a) associate b) closure c) commutative d) none

27. The degree of monomial is $-1.5x^3$ [ ]

a) -1.5 b) 3/2 c) 3 d) 2/3

28. The value of $-1.2x^3$ when x = 2 is [ ]

a) 9.6 b) -9.6 c) 8 d) 8.6

III. Fill in the blanks:

29. $\left(3.2x^3\right)+\left(-1.7x^3\right)-\left(2x^3\right)-\left(-3.x^3\right)=$_____

30. Degree of the polynomial $5x^5$ is _____

31. $A = 6x^4 - 11x,\ B = x^3 - 5x + 4$ then A+B = _____

32. The product of any two polynomials is a _____

33. A,B and C are three polynomials and $A \times (B + C) = A \times B + A \times C$ is called _____

34. $(x^2 + 2x - 3)(-2x)$ = _____

35. For any two polynomials A and B, A+B = _____

36. Additive identity of polynomials is _____

37. _____ does not exist in polynomials.

38. $(101)^2$ = _____

39. Formula of $a^3 + b^3$ = _____

40. If $ab + bc + ca = 0$ then $(a + b + c)^2$ = _____

41. Simplified form of $\frac{a^3 + b^3 + c^3 - 3abc}{a^2 + b^2 + c^2 - ab - bc - ca}$ = _____

42. The co-efficient of x in $(x + a)(x + b)(x + c)$ is _____

43. $\left(\sqrt{x} - \sqrt{y}\right)^2$ = _____

44. $(a + b)^3 - a^3 - b^3$ = _____

45. If $a + b = c$ then $a^3 + b^3 + 3abc$ = _____

46. $\left(\sqrt{2} + 1\right)^3$ = _____

IV. Matching :

	Group A		**Group B**
47.	The value of $3x^2$ when $x = \sqrt{3}$	[ ]	A. Multiplicative identity
48.	Addition of polynomials	[ ]	B. Multiplicative inverse
49.	Multiplication of polynomials	[ ]	C. Additive identity
50.	$A \times 1 = 1 \times A = A$. This is called	[ ]	D. Commutative property
51.	For every polynomial A+0=0+A=A is called	[ ]	E. 27
			F. 9
			G. Not Commutative