EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Polynomials

Grade : CBSE Grade IX

1. Factorize $(x^2+2xa+4x+a^2+4a-12)$

   (i) $(x-a-2)(x+a-6)$ (ii) $(x+a+6)(x+a-2)$ (iii) $(x+a+6)(x-a-2)$ (iv) $(x+a-2)(x-a+6)$

   (v) $(x-a+6)(x+a+2)$

2. Which of the following is a factor of $(10x^5+y^5z^3)$?

   (i) y^4 (ii) x^5z^3 (iii) y^5z^3 (iv) no factors (v) $10x^5$

3. $(-\frac{3}{2}a+2b)(-\frac{3}{2}a-2b)$

   (i) $(\frac{13}{6}a^2-4b^2)$ (ii) $(\frac{9}{4}a^2-b^2)$ (iii) $(\frac{5}{2}a^2-4b^2)$ (iv) $(\frac{9}{4}a^2-4b^2)$ (v) $(\frac{9}{4}a^2-7b^2)$

4. Factorize $(8x+5y)^2-2(8x+5y)(2x+4y)+(2x+4y)^2$

   (i) $(6x+y)^2$ (ii) $(-5x-y)^2$ (iii) $(8x+5y)(2x+4y)$ (iv) $(7x+y)^2$ (v) $(10x+9y)^2$

5. The degree of polynomial $(2a^2b-9b^2c-5b^2-5bc+4c^2)$ is

   (i) 2 (ii) 0 (iii) 6 (iv) 4 (v) 3

6. Which of the following algebraic expressions is a monomial?

   (i) $(-b^4)$ (ii) $(5b^4+6b^3-9b^2-8b+8)$ (iii) $(b^4+4b^3-b^2+2b+4)$ (iv) $(-4b^4+5b-2)$ (v) $(6b^4+6b)$

7. The expanded form of $(x+8)(x-3)(x+2)(x-5)$ is

   (i) $(2x^4+2x^3-49x^2+22x+240)$ (ii) $(2x^3-49x^2+22x+240)$ (iii) $(-2x^4+2x^3-49x^2+22x+240)$

   (iv) $(x^4+2x^3-49x^2+22x+240)$ (v) $(3x^4+2x^3-49x^2+22x+240)$

8. The coefficient of term gh in polynomial $(-4g^2h^2i-g^2i+9gh+5i^2+i)$ is

   (i) 8 (ii) 10 (iii) 9 (iv) 6 (v) 11

9. $(-4x^4-6x^3+34x^2+54x+18)\div(-2x^3-2x^2+18x+18)=$

   (i) $(2x+1)$ (ii) $(x+1)$ (iii) $(-2x+1)$ (iv) $(3x+1)$ (v) $(2x-1)$

10. Which of the following are not polynomials?

a) $\frac{(2x+2y)}{(3x-2y)}$

b) √x

c) $(3x-2y)$

d) $100x^2$

e) $(6x^2+2xy-4y^2)$

(i) {c,a} (ii) {e,c,a} (iii) {d,b} (iv) {a,b} (v) {d,b,a}

11. Which of the following polynomials is not a multiple of $(x+2)$?

(i) (x^2+x-2) (ii) (x^2-2x-8) (iii) $(x^2-3x-10)$ (iv) (x^2-4x-5) (v) (x^2+3x+2)

12. Factorize $a^2 - b^2 - c^2 - 2bc$

(i) $(a-b-c)(a+b-c)$ (ii) $(a-b-c)(a+b+c)$ (iii) $(a+b+c)(a+b-c)$ (iv) $(a+b+c)(a-b+c)$

(v) $(a-b-c)(a-b+c)$

13. $(8x^3+16x^2) \div 4x$

(i) $(2x^2-4x)$ (ii) (x^2+4x) (iii) $(2x^2+4x)$ (iv) $(-2x^2+4x)$ (v) $(2x^2+5x)$

14. The remainder when $7n^2$ is divided by $(n+8)$ is

(i) 447 (ii) 445 (iii) 448 (iv) 449 (v) 451

15. Find the value of $3.2^3 + 9^3 - 12.2^3$

(i) 5832 (ii) -5832 (iii) -262.144 (iv) -1054.08 (v) 262.144

16. The remainder when $(-7u^2+2u-9)$ is divided by $(u-5)$ is

(i) (-177) (ii) (-174) (iii) (-173) (iv) (-175) (v) (-171)

17. Which of the following algebraic expressions is a binomial?

(i) $(9v^4+4v^3-v)$ (ii) $(-6v^4)$ (iii) $(9v^4-2v^2)$ (iv) $(2v^4+3v^3-4v^2+2v-9)$

(v) $(-4v^4+5v^3-2v^2-2v+2)$

18. The value of $61\frac{1}{3} \times 60\frac{1}{2}$ is

(i) $3711\frac{1}{3}$ (ii) 3710 (iii) $3710\frac{2}{3}$ (iv) 3712 (v) $3710\frac{2}{5}$

19. If the polynomial $f(x)=4x^2 - 18x + k$ is exactly divisible by $(2x-6)$, find k

(i) 17 (ii) 19 (iii) 20 (iv) 18 (v) 15

20. The coefficient of term q^2 in polynomial $(q^2r^2+4q^2+7qr-2q)$ is

(i) 7 (ii) 4 (iii) 1 (iv) 5 (v) 3

21. $(a+b)^2$

(i) $(a^2+5ab+b^2)$ (ii) $(a^2+2ab+b^2)$ (iii) $(2a^2+2ab+b^2)$ (iv) $(2ab+b^2)$ (v) (a^2+b^2)

22. Factorize $(a+b)^2 - c^2$

(i) $(a+b-c)(a-b-c)$ (ii) $(a+b-c)(a-b+c)$ (iii) $(a+b+c)(a-b-c)$ (iv) $(a+b+c)(a-b+c)$

(v) $(a+b+c)(a+b-c)$

23. The remainder when $(3u^4-7u^3+3u^2-3u)$ is divided by $(u+6)$ is

(i) 5527 (ii) 5529 (iii) 5526 (iv) 5524 (v) 5525

24. The degree of the polynomial $(4c^5+c^3-7c^2-3c-8)$ is

(i) 6 (ii) 2 (iii) 4 (iv) 5 (v) 7

25. Factorize $(x^3+3x^2a+3xa^2-x+a^3-a)$

(i) $(x-a)(x+a-1)(x-a+1)$ (ii) $(x-a)(x-a-1)(x+a+1)$ (iii) $(x+a)(x+a-1)(x-a+1)$

(iv) $(x+a)(x+a-1)(x+a+1)$ (v) $(x+a)(x-a-1)(x+a+1)$

Assignment Key

1) (ii)	2) (iv)	3) (iv)	4) (i)	5) (v)	6) (i)
7) (iv)	8) (iii)	9) (i)	10) (iv)	11) (iv)	12) (ii)
13) (iii)	14) (iii)	15) (iv)	16) (ii)	17) (iii)	18) (iii)
19) (iv)	20) (ii)	21) (ii)	22) (v)	23) (iii)	24) (iv)
25) (iv)					