EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Polynomials

Grade : CBSE Grade IX

1. $(36x^4y^3z^3+108x^4y^3z^2+540x^3y^2z^3)\div 6x^2yz=$

   (i) $(18x^2y^3z^2+6x^2y^2z^2+90xyz^2)$ (ii) $(6x^3y^3z^2+18x^2y^2z+90xyz^2)$ (iii) $(6x^2y^2z^2+18x^2y^2z+90xyz^2)$

   (iv) $(6x^2y^2z^2+18xy^3z+90xyz^2)$ (v) $(6x^3y^4z^2+18x^2y^2z+90xyz^2)$

2. The coefficient of term eg^2 in polynomial $(-5e^3f^3-e^3f^2g^2-3e^2g-5ef^2g^2+3eg^3+4eg^2+9fg)$ is

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

3. Which of the following algebraic expressions is a constant polynomial?

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

4. The value of $90\frac{2}{3}\times 89\frac{1}{4}$ is

   (i) 8092 (ii) 8091 (iii) 8095 (iv) 8093 (v) 8090

5. The value of the polynomial $(8g^4-8g^3-2g^2+4g-7)$ at $g=(-5)$ is

   (i) 5923 (ii) 5921 (iii) 5924 (iv) 5922 (v) 5926

6. Factorize $(x^2+16x+63)$

   (i) $(x+9)(x+7)$ (ii) $(x-9)(x+7)$ (iii) $(x+9)(x-7)$ (iv) $(x-9)(x-7)$

7. Factorize $(24xy+15y^2)$

   (i) $3y(8x-5y)$ (ii) $3y(8x+5y)$ (iii) $3x(8x+5y)$ (iv) $3y(-8x-5y)$ (v) $3x(8x-5y)$

8. The degree of polynomial $(9u^2v^2-9u^2vw^2+4u^2vw+4u^2w+6vw)$ is

   (i) 3 (ii) 6 (iii) 5 (iv) 4 (v) 7

9. The expanded form of $(x+1)(x-1)(x+2)(x+6)$ is

   (i) $(3x^4+8x^3+11x^2-8x-12)$ (ii) $(8x^3+11x^2-8x-12)$ (iii) $(x^4+8x^3+11x^2-8x-12)$

   (iv) $(-2x^4+8x^3+11x^2-8x-12)$ (v) $(2x^4+8x^3+11x^2-8x-12)$

10. $(-5a-5b)^3$

    (i) $(-125a^3-375a^2b-375ab^2-125b^3)$ (ii) $(-125a^3-378a^2b-375ab^2-125b^3)$

    (iii) $(-126a^3-375a^2b-375ab^2-125b^3)$ (iv) $(-125a^3-373a^2b-375ab^2-125b^3)$

    (v) $(-124a^3-375a^2b-375ab^2-125b^3)$

11. Which of the following algebraic expressions is a constant polynomial?

(i) $(-9c^5+4c^4-9c^3+8c^2+4c)$ (ii) $(7c^3+6c^2+4c-6)$ (iii) $(-7c-3)$ (iv) (-9) (v) $(6c^2-5c-7)$

12. $(a+b)^2$

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

13. $(a-b)^2$

(i) $(-2ab+b^2)$ (ii) $(2a^2-2ab+b^2)$ (iii) $(a^2-2ab+b^2)$ (iv) (a^2+b^2) (v) $(a^2-4ab+b^2)$

14. Which of the following are polynomials?

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

b) x^2

c) $(x+y)$

d) $x^2+\frac{1}{x^2}$

e) $x+\frac{1}{x}$

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

15. Given $f(g)=(3g^4+3g^3+3g^2-5g+8)$, find $f(2)$

(i) 81 (ii) 84 (iii) 83 (iv) 79 (v) 82

16. Which of the following algebraic expressions is a constant polynomial?

(i) $(-6n^3o-7n^2op^3+2op^2)$ (ii) $(2o+p^3)$ (iii) $(3n^3o^3p^3+3n^3p^2+8no^3+4p)$ (iv) $(-9no^3p^3)$ (v) 2

17. Factorize $(a-b)^3+(b-c)^3+(c-a)^3$

(i) $3(a+b)(b-c)(c-a)$ (ii) $3(a-b)(b-c)(c+a)$ (iii) $3(a-b)(b-c)(c-a)$ (iv) $3(a-b)(b+c)(c+a)$

(v) $3(a-b)(b+c)(c-a)$

18. The degree of the polynomial $(-3u^3+4u^2+7u)$ is

(i) 5 (ii) 1 (iii) 3 (iv) 2 (v) 4

19. Given $f(r)=(5r^3+9r^2+9r)$, find $f((-1))$

(i) -6 (ii) -2 (iii) -5 (iv) -4 (v) -8

20. Factorize $(80x^3+220x^2y+190xy^2+50y^3)$

(i) $(5x+5y)(4x+5y)(4x+2y)$ (ii) $(5x+5y)(4x-5y)(4x-2y)$ (iii) $(5x+5y)(4x+5y)(4x-2y)$

(iv) $(5x-5y)(4x+5y)(4x-2y)$ (v) $(5x-5y)(4x+5y)(4x+2y)$

21. The expanded form of $(3x+1)(3x-7)(2x-1)$ is

(i) $(18x^3-45x^2+4x+7)$ (ii) $(17x^3-45x^2+4x+7)$ (iii) $(19x^3-45x^2+4x+7)$ (iv) $(15x^3-45x^2+4x+7)$

(v) $(21x^3-45x^2+4x+7)$

22. Factorize $(20x^2+5xy-15y^2)$

(i) $(5x-5y)(4x+3y)$ (ii) $(5x+5y)(5x+5y)$ (iii) $(5x+5y)(4x+3y)$ (iv) $(5x+5y)(4x-3y)$

(v) $(5x-5y)(4x-3y)$

23. The value of 35×35 is

(i) 1223 (ii) 1225 (iii) 1226 (iv) 1228 (v) 1224

24. $(12x^3y^4+4x^2y^3) \div 2xy^2 =$

(i) $(6x^2y^2+2xy^2z)$ (ii) $(6x^3y^3+2xy)$ (iii) $(6x^2y^2+2y^2)$ (iv) $(6x^3y^4+2xy)$ (v) $(6x^2y^2+2xy)$

25. Which of the following algebraic expressions is a trinomial?

(i) $(-3u^3w^2-7u^3w+2uv^2w-6uw^2)$ (ii) $(3u^3vw+uv^3w^2)$ (iii) $(-9u^3v^3w)$

(iv) $(u^2v^3w^2+6uvw+4u+9vw^3)$ (v) $(-3u^2vw-5u^2w^2-6uvw^3)$

Assignment Key

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