EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Polynomials and Factorisation

Grade : SSC Grade IX

1. $(3a-5b-5c)^2$

   (i) $(10a^2-30ab-30ac+25b^2+50bc+25c^2)$ (ii) $(9a^2-27ab-30ac+25b^2+50bc+25c^2)$

   (iii) $(9a^2-32ab-30ac+25b^2+50bc+25c^2)$ (iv) $(8a^2-30ab-30ac+25b^2+50bc+25c^2)$

   (v) $(9a^2-30ab-30ac+25b^2+50bc+25c^2)$

2. Which of the following are possible values for the length and breadth of a rectangle whose area is $(9x^2+12x+3)$

   (i) $(-3x-1)(-3x-3)$ (ii) $(-3x+1)(-3x+3)$ (iii) $(-3x+1)(-3x-3)$ (iv) $(4x+3)(-3x+3)$

   (v) $(-3x-1)(-3x+3)$

3. Factorize and divide $(-10x^4-33x^3+49x^2+66x-72)\div(-x^2-3x+4)$

   (i) $(10x^2-3x-18)$ (ii) $(10x^2-27x+18)$ (iii) $(10x^2+27x+18)$ (iv) $(-5x^2-14x+24)$

   (v) $(10x^2+3x-18)$

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

   (i) $(8k^2l^3m^2+k^2l^2-7k^2l+klm^3)$ (ii) $(-9k^3l^2m-3k^3l^2)$ (iii) $(-9k^3l^3+9k^2lm+8lm^3)$ (iv) $2k^2lm^3$

   (v) $(-4k^3l^2-6kl^3m^3+6kl^3+4lm^2)$

5. Which of the following algebraic expressions is a linear polynomial?

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

6. $\left(\frac{3}{2}a+\frac{3}{2}b\right)^3$

   (i) $\left(\frac{27}{8}a^3+\frac{81}{8}a^2b+\frac{81}{8}ab^2+\frac{27}{8}b^3\right)$ (ii) $\left(\frac{27}{8}a^3+\frac{79}{8}a^2b+\frac{81}{8}ab^2+\frac{27}{8}b^3\right)$ (iii) $\left(\frac{33}{10}a^3+\frac{81}{8}a^2b+\frac{81}{8}ab^2+\frac{27}{8}b^3\right)$

   (iv) $\left(\frac{7}{2}a^3+\frac{81}{8}a^2b+\frac{81}{8}ab^2+\frac{27}{8}b^3\right)$ (v) $\left(\frac{27}{8}a^3+\frac{83}{8}a^2b+\frac{81}{8}ab^2+\frac{27}{8}b^3\right)$

7. Factorize $(-27a^3+180abc-125b^3-64c^3)$

(i) $(-2a-5b-4c)(10a^2-15ab-12ac+25b^2-20bc+16c^2)$

(ii) $(-3a-7b-4c)(9a^2-17ab-12ac+25b^2-20bc+16c^2)$

(iii) $(-3a-2b-4c)(9a^2-12ab-12ac+25b^2-20bc+16c^2)$

(iv) $(-3a-5b-4c)(9a^2-15ab-12ac+25b^2-20bc+16c^2)$

(v) $(-4a-5b-4c)(8a^2-15ab-12ac+25b^2-20bc+16c^2)$

8. The expanded form of $(3x+9)(2x-2)(x-8)$ is

(i) $(6x^3-36x^2-114x+144)$ (ii) $(5x^3-36x^2-114x+144)$ (iii) $(4x^3-36x^2-114x+144)$

(iv) $(7x^3-36x^2-114x+144)$ (v) $(8x^3-36x^2-114x+144)$

9. The value of 74×63 is

(i) 4661 (ii) 4659 (iii) 4665 (iv) 4663 (v) 4662

10. $(a+b)(a^2-ab+b^2)$

(i) $(2a^3+b^3)$ (ii) (a^3-2b^3) (iii) b^3 (iv) (a^3+b^3) (v) (a^3+3b^3)

11. Which of the following are not polynomials?

a) $100x^2+\frac{1}{100x^2}$

b) √x

c) $(4x-8y)$

d) $(12x+7y)$

e) $100x^2$

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

12. The degree of polynomial $(-5q^3r^2s^3-2q^3r-2q^2r^2s-3q^2s-4qrs-3qs^3+7rs)$ is

(i) 6 (ii) 7 (iii) 10 (iv) 9 (v) 8

13. The quotient of $(a^2+4ab+4b^2) \div (a+2b)$ is

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

14. Which of the following are polynomials?

a) x^2

b) $(x+y)$

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

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

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

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

15. The degree of polynomial $(-no+7n+7o-1)$ is

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

16. If $(-a+5b-5c)\times A=(a^2-10ab+10ac+25b^2-50bc+25c^2)$, then A =

(i) $(-a+5b-5c)$ (ii) $(-a+7b-5c)$ (iii) $(5b-5c)$ (iv) $(-2a+5b-5c)$ (v) $(-a+3b-5c)$

17. Which of the following terms can be subtracted from $5tu^2s^2$?

(i) $(-5stu^2)$ (ii) $(-7s^2t^2u^2)$ (iii) $(-s^2tu^2)$ (iv) $(-4s^2tu)$ (v) $2s^2t^2u$

18. Given $f(h)=(h^4+2h^3-7h^2-8h+3)$, find $f(0)$

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

19. The remainder when $(e^4-5e^3+9e^2-2e)$ is divided by $(e^2+4e-32)$ is

(i) $(-599e+2464)$ (ii) $(-601e+2464)$ (iii) $(-595e+2464)$ (iv) $(-598e+2464)$ (v) $(-597e+2464)$

20. If $(a+b+c)=15$, $(ab+ac+bc)=62$, find $(a^2+b^2+c^2)$

(i) 104 (ii) 101 (iii) 99 (iv) 100 (v) 102

21. Which of the following terms can be added to u ?

(i) u^3 (ii) $6u^4$ (iii) (-9) (iv) $4u^2$ (v) $(-7u)$

22. Which of the following terms can be added to 7 ?

(i) $4d^4$ (ii) $(-3d)$ (iii) 2 (iv) $(-2d^2)$ (v) $(-3d^3)$

23. $(-2a+4b)^3$

(i) $(-8a^3+48a^2b-96ab^2+64b^3)$ (ii) $(-8a^3+45a^2b-96ab^2+64b^3)$

(iii) $(-9a^3+48a^2b-96ab^2+64b^3)$ (iv) $(-7a^3+48a^2b-96ab^2+64b^3)$

(v) $(-8a^3+50a^2b-96ab^2+64b^3)$

24. Which of the following is a like term of $(-2bc)$?

(i) $(-4a)$ (ii) $5b$ (iii) $(-4bc)$ (iv) $3ac$ (v) $8c$

25. Which of the following terms can be added to $(-4df^2)$?

(i) $(-8df^2)$ (ii) $(-5f^2)$ (iii) $(-3d^2e)$ (iv) $2f$ (v) $(-5d^2e^2)$

Assignment Key

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