EduSahara™ Assignment

Name : Expansion

Chapter : Polynomials and Factorisation

Grade : SSC Grade IX

License : Non Commercial Use

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

   (i) $(2x^2+33x+72)$ (ii) $(3x^2+33x+72)$ (iii) $(4x^2+33x+72)$ (iv) $(6x^2+33x+72)$ (v) $(33x+72)$

2. The expanded form of $(3x+9)(3x-9)(2x-7)$ is

   (i) $(20x^3-63x^2-162x+567)$ (ii) $(16x^3-63x^2-162x+567)$ (iii) $(19x^3-63x^2-162x+567)$

   (iv) $(17x^3-63x^2-162x+567)$ (v) $(18x^3-63x^2-162x+567)$

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

   (i) $(2x^4-4x^3-71x^2+366x-432)$ (ii) $(3x^4-4x^3-71x^2+366x-432)$ (iii) $(-x^4-4x^3-71x^2+366x-432)$

   (iv) $(x^4-4x^3-71x^2+366x-432)$ (v) $(-4x^3-71x^2+366x-432)$

4. The expanded form of $(\frac{2}{3}c+\frac{2}{5})^3$ is

   (i) $(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})$ (ii) $(\frac{2}{3}c+\frac{2}{5})$ (iii) $(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})$ (iv) $(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})$

   (v) $(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})\times(\frac{2}{3}c+\frac{2}{5})$

5. The value of $(-2i-8)\times(4ij+4j)$ is

   (i) $(-8i^2j-42ij-32j)$ (ii) $(-8i^2j-37ij-32j)$ (iii) $(-9i^2j-40ij-32j)$ (iv) $(-8i^2j-40ij-32j)$

   (v) $(-7i^2j-40ij-32j)$

6. The value of $(5wx^2-12w)\times(2wx^2-3wx)$ is

   (i) $(10w^2x^4-15w^2x^3-24w^2x^2+36w^2x)$ (ii) $(11w^2x^4-15w^2x^3-24w^2x^2+36w^2x)$

   (iii) $(10w^2x^4-18w^2x^3-24w^2x^2+36w^2x)$ (iv) $(9w^2x^4-15w^2x^3-24w^2x^2+36w^2x)$

   (v) $(10w^2x^4-12w^2x^3-24w^2x^2+36w^2x)$

7. The expanded form of $(-g)^3$ is

   (i) $(-g)\times(-g)\times(-g)\times(-g)\times(-g)$ (ii) $(-g)\times(-g)\times(-g)\times(-g)$ (iii) $(-g)$ (iv) $(-g)\times(-g)\times(-g)$

   (v) $(-g)\times(-g)$

8. The expanded form of $(\frac{4}{5}s)^3$ is

(i) $\frac{4}{5}s\times\frac{4}{5}s\times\frac{4}{5}s$ (ii) $\frac{4}{5}s$ (iii) $\frac{4}{5}s\times\frac{4}{5}s$ (iv) $\frac{4}{5}s\times\frac{4}{5}s\times\frac{4}{5}s\times\frac{4}{5}s\times\frac{4}{5}s$ (v) $\frac{4}{5}s\times\frac{4}{5}s\times\frac{4}{5}s\times\frac{4}{5}s$

9. The expanded form of $(4bc)^3$ is

(i) $4bc$ (ii) $4bc\times4bc\times4bc\times4bc$ (iii) $4bc\times4bc\times4bc$ (iv) $4bc\times4bc\times4bc\times4bc\times4bc$ (v) $4bc\times4bc$

10. The expanded form of $(\frac{1}{2}tu)^3$ is

(i) $\frac{1}{2}tu\times\frac{1}{2}tu\times\frac{1}{2}tu\times\frac{1}{2}tu\times\frac{1}{2}tu$ (ii) $\frac{1}{2}tu$ (iii) $\frac{1}{2}tu\times\frac{1}{2}tu$ (iv) $\frac{1}{2}tu\times\frac{1}{2}tu\times\frac{1}{2}tu\times\frac{1}{2}tu$ (v) $\frac{1}{2}tu\times\frac{1}{2}tu\times\frac{1}{2}tu$

11. The expanded form of $(-c-1)^3$ is

(i) $(-c-1)\times(-c-1)\times(-c-1)$ (ii) $(-c-1)\times(-c-1)\times(-c-1)\times(-c-1)$

(iii) $(-c-1)\times(-c-1)\times(-c-1)\times(-c-1)\times(-c-1)$ (iv) $(-c-1)\times(-c-1)$ (v) $(-c-1)$

12. $(a+b)^2$

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

13. $(a-b)^2$

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

14. $(a+b)(a-b)$

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

15. $(a+b)^3$

(i) $(a^3+a^2b+3ab^2+b^3)$ (ii) $(2a^3+3a^2b+3ab^2+b^3)$ (iii) $(a^3+3a^2b+3ab^2+b^3)$

(iv) $(3a^2b+3ab^2+b^3)$ (v) $(a^3+6a^2b+3ab^2+b^3)$

16. $(a-b)^3$

(i) $(-3a^2b+3ab^2-b^3)$ (ii) $(a^3-5a^2b+3ab^2-b^3)$ (iii) $(a^3-3a^2b+3ab^2-b^3)$

(iv) $(2a^3-3a^2b+3ab^2-b^3)$ (v) $(a^3-a^2b+3ab^2-b^3)$

17. $(a+b+c)^2$

(i) $(a^2+2ab+2ac+b^2+2bc+c^2)$ (ii) $(a^2+5ab+2ac+b^2+2bc+c^2)$ (iii) $(2ab+2ac+b^2+2bc+c^2)$

(iv) $(2a^2+2ab+2ac+b^2+2bc+c^2)$ (v) $(a^2+2ac+b^2+2bc+c^2)$

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

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

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

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

20. $(a+b+c)(a^2-ab-ac+b^2-bc+c^2)$

(i) $(a^3-3abc+b^3+c^3)$ (ii) $(-3abc+b^3+c^3)$ (iii) $(a^3-6abc+b^3+c^3)$ (iv) $(a^3-abc+b^3+c^3)$

(v) $(2a^3-3abc+b^3+c^3)$

21. $(-4a+b)^2$

(i) $(15a^2-8ab+b^2)$ (ii) $(17a^2-8ab+b^2)$ (iii) $(16a^2-6ab+b^2)$ (iv) $(16a^2-11ab+b^2)$

(v) $(16a^2-8ab+b^2)$

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

(i) $(4a^2-6ab+4b^2)$ (ii) $(4a^2-11ab+4b^2)$ (iii) $(3a^2-8ab+4b^2)$ (iv) $(5a^2-8ab+4b^2)$

(v) $(4a^2-8ab+4b^2)$

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

(i) $(16a^2-4b^2)$ (ii) $(16a^2-6b^2)$ (iii) $(15a^2-4b^2)$ (iv) $(16a^2-b^2)$ (v) $(17a^2-4b^2)$

24. $(-2a+4b)^3$

(i) $(-9a^3+48a^2b-96ab^2+64b^3)$ (ii) $(-8a^3+46a^2b-96ab^2+64b^3)$

(iii) $(-8a^3+48a^2b-96ab^2+64b^3)$ (iv) $(-7a^3+48a^2b-96ab^2+64b^3)$

(v) $(-8a^3+51a^2b-96ab^2+64b^3)$

25. $(-2a+2b)^3$

(i) $(-8a^3+24a^2b-24ab^2+8b^3)$ (ii) $(-8a^3+21a^2b-24ab^2+8b^3)$ (iii) $(-8a^3+27a^2b-24ab^2+8b^3)$

(iv) $(-7a^3+24a^2b-24ab^2+8b^3)$ (v) $(-9a^3+24a^2b-24ab^2+8b^3)$

26. $(-4a-b-4c)^2$

(i) $(17a^2+8ab+32ac+b^2+8bc+16c^2)$ (ii) $(15a^2+8ab+32ac+b^2+8bc+16c^2)$

(iii) $(16a^2+5ab+32ac+b^2+8bc+16c^2)$ (iv) $(16a^2+8ab+32ac+b^2+8bc+16c^2)$

(v) $(16a^2+10ab+32ac+b^2+8bc+16c^2)$

27. $(3a-2b)(9a^2+6ab+4b^2)$

(i) $(27a^3-5b^3)$ (ii) $(27a^3-10b^3)$ (iii) $(26a^3-8b^3)$ (iv) $(28a^3-8b^3)$ (v) $(27a^3-8b^3)$

28. $(-4a-b)(16a^2-4ab+b^2)$

(i) $(-63a^3-b^3)$ (ii) $(-64a^3-4b^3)$ (iii) $(-65a^3-b^3)$ (iv) $(-64a^3+b^3)$ (v) $(-64a^3-b^3)$

29. $(4a-2b-3c)(16a^2+8ab+12ac+4b^2-6bc+9c^2)$

(i) $(64a^3-72abc-8b^3-27c^3)$ (ii) $(64a^3-74abc-8b^3-27c^3)$ (iii) $(65a^3-72abc-8b^3-27c^3)$

(iv) $(64a^3-69abc-8b^3-27c^3)$ (v) $(63a^3-72abc-8b^3-27c^3)$

30. Expand $\left(x+\frac{1}{x}\right)^2$

(i) $x+2+\frac{1}{x^2}$ (ii) $4x^2+2+\frac{1}{x^2}$ (iii) $x^2+2+\frac{1}{x^2}$ (iv) $x^3+2+\frac{1}{x^2}$ (v) $-2x^2+2+\frac{1}{x^2}$

31. Expand $\left(x-\frac{1}{x}\right)^2$

(i) $x^3-2+\frac{1}{x^2}$ (ii) $x^2-2+\frac{4}{x^2}$ (iii) $x^2-3+\frac{1}{x^2}$ (iv) $x^2-2+\frac{1}{x^2}$ (v) $x^2-2-\frac{1}{x^2}$

32. Expand $\left(x-\frac{1}{x}\right)\left(x+\frac{1}{x}\right)\left(x^2+\frac{1}{x^2}\right)$

(i) $4x^5+7x+4x^3+\frac{7}{x}+\frac{3}{x^3}+\frac{3}{x^5}$ (ii) $x^5+x^3+x+\frac{1}{x}$ (iii) $x^4-\frac{1}{x^4}$ (iv) $-x-\frac{2}{x^3}-\frac{1}{x^7}$

33. Expand $(x-1)(x+1)(x^2+1)$

(i) $-2x^3-2x$ (ii) x^4-1 (iii) $3x^5+6x^3+3x^4+6x^2+3x+3$ (iv) $x^5+x^4+x^3+x^2$

Assignment Key

1) (ii)	2) (v)	3) (iv)	4) (i)	5) (iv)	6) (i)
7) (iv)	8) (i)	9) (iii)	10) (v)	11) (i)	12) (i)
13) (iii)	14) (iv)	15) (iii)	16) (iii)	17) (i)	18) (v)
19) (ii)	20) (i)	21) (v)	22) (v)	23) (i)	24) (iii)
25) (i)	26) (iv)	27) (v)	28) (v)	29) (i)	30) (iii)
31) (iv)	32) (iii)	33) (ii)			

Copyright © Small Systems Computing Pvt. Ltd.