EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Special Products As Identities

Grade : ICSE Grade VII

1. The value of $401\frac{1}{2} \times 399\frac{1}{3}$ is

   (i) $160332\frac{1}{3}$ (ii) $160332\frac{1}{5}$ (iii) $160331\frac{2}{3}$ (iv) 160333

2. $(-2a+\frac{2}{3}b)(4a^2+\frac{4}{3}ab+\frac{4}{9}b^2)$

   (i) $(-8a^3+\frac{10}{27}b^3)$ (ii) $(-8a^3+\frac{2}{9}b^3)$ (iii) $(-7a^3+\frac{8}{27}b^3)$ (iv) $(-9a^3+\frac{8}{27}b^3)$ (v) $(-8a^3+\frac{8}{27}b^3)$

3. $(-\frac{3}{2}a+\frac{3}{2}b+2c)(\frac{9}{4}a^2+\frac{9}{4}ab+3ac+\frac{9}{4}b^2-3bc+4c^2)$

   (i) $(-\frac{27}{8}a^3+\frac{25}{2}abc+\frac{27}{8}b^3+8c^3)$ (ii) $(-\frac{7}{2}a^3+\frac{27}{2}abc+\frac{27}{8}b^3+8c^3)$ (iii) $(-\frac{27}{8}a^3+\frac{29}{2}abc+\frac{27}{8}b^3+8c^3)$

   (iv) $(-\frac{33}{10}a^3+\frac{27}{2}abc+\frac{27}{8}b^3+8c^3)$ (v) $(-\frac{27}{8}a^3+\frac{27}{2}abc+\frac{27}{8}b^3+8c^3)$

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

   (i) (a^3+b^3) (ii) (a^3-4b^3) (iii) $(2a^3-b^3)$ (iv) $(-b^3)$ (v) (a^3-b^3)

5. If $\left(x-\frac{1}{x}\right)=9$, find the value of $\left(x^2+\frac{1}{x^2}\right)$

   (i) 83 (ii) 80 (iii) 85 (iv) 82 (v) 84

6. If $\left(x-\frac{1}{x}\right)=3$, find the value of $\left(x^4+\frac{1}{x^4}\right)$

   (i) 118 (ii) 120 (iii) 117 (iv) 119 (v) 121

7. The value of 107×99 is

   (i) 10590 (ii) 10593 (iii) 10594 (iv) 10592 (v) 10595

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

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

9. $(2a+5b-4c)(4a^2-10ab+8ac+25b^2+20bc+16c^2)$

(i) $(8a^3+117abc+125b^3-64c^3)$ (ii) $(7a^3+120abc+125b^3-64c^3)$ (iii) $(8a^3+122abc+125b^3-64c^3)$

(iv) $(8a^3+120abc+125b^3-64c^3)$ (v) $(9a^3+120abc+125b^3-64c^3)$

10. $(2a-4b)^2$

(i) $(3a^2-16ab+16b^2)$ (ii) $(5a^2-16ab+16b^2)$ (iii) $(4a^2-16ab+16b^2)$ (iv) $(4a^2-13ab+16b^2)$

(v) $(4a^2-19ab+16b^2)$

11. If $(4a+3b)=18$, $ab=6$, find $(256a^4+81b^4)$

(i) 22033 (ii) 22031 (iii) 22035 (iv) 22032 (v) 22029

12. $(-3a-5b)(9a^2-15ab+25b^2)$

(i) $(-27a^3-128b^3)$ (ii) $(-26a^3-125b^3)$ (iii) $(-27a^3-122b^3)$ (iv) $(-28a^3-125b^3)$

(v) $(-27a^3-125b^3)$

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

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

14. The value of 103×108 is

(i) 11125 (ii) 11124 (iii) 11123 (iv) 11122 (v) 11127

15. If $(a+b)=7$, $ab=10$, find (a^2+b^2)

(i) 28 (ii) 29 (iii) 30 (iv) 32 (v) 27

16. $(a+b)^2$

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

17. The value of 74×66 is

(i) 4883 (ii) 4887 (iii) 4884 (iv) 4882 (v) 4885

18. The value of 31×31 is

(i) 961 (ii) 963 (iii) 958 (iv) 960 (v) 962

19. The value of 86×86 is

(i) 7394 (ii) 7397 (iii) 7399 (iv) 7395 (v) 7396

20. $(-5a+5b)^2$

(i) $(24a^2-50ab+25b^2)$ (ii) $(25a^2-52ab+25b^2)$ (iii) $(26a^2-50ab+25b^2)$ (iv) $(25a^2-48ab+25b^2)$

(v) $(25a^2-50ab+25b^2)$

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

(i) $x^4-\frac{1}{x^4}$ (ii) $-x-\frac{2}{x^3}-\frac{1}{x^7}$ (iii) $x^5+x^3+x+\frac{1}{x}$ (iv) $3x^5+6x+3x^3+\frac{6}{x}+\frac{3}{x^3}+\frac{3}{x^5}$

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

(i) $(2a^2+2ab+2ac+b^2+2bc+c^2)$ (ii) $(a^2-ab+2ac+b^2+2bc+c^2)$ (iii) $(a^2+4ab+2ac+b^2+2bc+c^2)$

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

23. Evaluate : 980^2-20^2

(i) 960020 (ii) 9600000 (iii) 96000 (iv) 960980 (v) 960000

24. The value of $40\frac{1}{3}\times 40\frac{1}{3}$ is

(i) $1626\frac{5}{9}$ (ii) $1626\frac{7}{9}$ (iii) $1626\frac{7}{11}$ (iv) 1627

25. $(a-b)^2$

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

Assignment Key

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