

EduSahara™ Learning Center Assignment**Grade : Class VIII, ICSE****Chapter : Special Products and Expansions****Name : Finding Values of Expressions****Licensed To : Teachers and Students for non-commercial use**

1. If $\left(x + \frac{1}{x}\right) = 3$, find the value of $\left(x^2 + \frac{1}{x^2}\right)$

- (i) 6 (ii) 5 (iii) 10 (iv) 7 (v) 8
-

2. If $\left(x + \frac{1}{x}\right) = 7$, find the value of $\left(x^4 + \frac{1}{x^4}\right)$

- (i) 2207 (ii) 2210 (iii) 2206 (iv) 2204 (v) 2208
-

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

- (i) 5 (ii) 4 (iii) 7 (iv) 6 (v) 9
-

4. If $\left(x - \frac{1}{x}\right) = 7$, find the value of $\left(x^4 + \frac{1}{x^4}\right)$

- (i) 2600 (ii) 2598 (iii) 2602 (iv) 2596 (v) 2599
-

5. If $\left(x^2 + \frac{1}{x^2}\right) = 14$, find the value of $\left(x + \frac{1}{x}\right)$

- (i) 6 (ii) 3 (iii) 4 (iv) 5 (v) 1
-

6. If $\left(x^4 + \frac{1}{x^4}\right) = 2$, find the value of $\left(x + \frac{1}{x}\right)$

$$x^4$$

$$x$$

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

7. If $\left(x^2 + \frac{1}{x^2}\right) = 11$, find the value of $\left(x - \frac{1}{x}\right)$

- (i) 2 (ii) 0 (iii) 3 (iv) 5 (v) 4
-

8. If $\left(x^4 + \frac{1}{x^4}\right) = 1442$, find the value of $\left(x - \frac{1}{x}\right)$

- (i) 7 (ii) 9 (iii) 6 (iv) 5 (v) 4
-

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

- (i) 233 (ii) 236 (iii) 232 (iv) 234 (v) 235
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10. If $\left(x + \frac{1}{x}\right) = 8$, find the value of $\left(x^3 + \frac{1}{x^3}\right)$

- (i) 487 (ii) 488 (iii) 489 (iv) 491 (v) 485
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11. If $\left(4x + \frac{1}{2x}\right) = 8$, find the value of $\left(16x^2 + \frac{1}{4x^2}\right)$

- (i) 57 (ii) 59 (iii) 61 (iv) 62 (v) 60
-

12. If $\left(6x - \frac{1}{3x}\right) = 4$, find the value of $\left(36x^2 + \frac{1}{9x^2}\right)$

(i) 21 (ii) 18 (iii) 22 (iv) 20 (v) 19

13. If $\left(3x - \frac{1}{3x} \right) = 3$, find the value of $\left(27x^3 - \frac{1}{27x^3} \right)$

(i) 37 (ii) 35 (iii) 36 (iv) 33 (v) 38

14. If $(a + b) = 8$, $ab = 12$, find $(a^2 + b^2)$

(i) 41 (ii) 38 (iii) 39 (iv) 40 (v) 42

15. If $(a^2 + b^2) = 61$, $ab = 30$, find $(a + b)$

(i) 11 (ii) 9 (iii) 10 (iv) 14 (v) 12

16. If $(a - b) = 2$, $ab = 8$, find $(a^2 - b^2)$

(i) 12 (ii) 11 (iii) 15 (iv) 10 (v) 13

17. If $(a^2 - b^2) = 16$, $ab = 15$, find $(a - b)$

(i) 5 (ii) 3 (iii) 1 (iv) 0 (v) 2

18. If $(7a + 3b) = 34$, $ab = 8$, find $(49a^2 + 9b^2)$

(i) 818 (ii) 821 (iii) 819 (iv) 822 (v) 820

19. If $(9a^2 + 4b^2) = 160$, $ab = 8$, find $(3a + 2b)$

(i) 16 (ii) 15 (iii) 19 (iv) 13 (v) 17

20. If $(a + b) = 8$, $ab = 12$, find $(a^3 + b^3)$

(i) 226 (ii) 222 (iii) 224 (iv) 223 (v) 225

21. If $(a - b) = 3$, $ab = 28$, find $(a^3 - b^3)$

(i) 278 (ii) 282 (iii) 277 (iv) 279 (v) 280

22. If $(5a + 5b) = 50$, $ab = 24$, find $(125a^3 + 125b^3)$

(i) 34997 (ii) 35000 (iii) 35001 (iv) 35003 (v) 34999

23. If $(a + b) = 10$, $ab = 24$, find $(a^4 + b^4)$

(i) 1554 (ii) 1553 (iii) 1550 (iv) 1552 (v) 1551

24. If $(a^4 + b^4) = 1921$, $ab = 30$, find $(a + b)$

(i) 13 (ii) 11 (iii) 10 (iv) 9 (v) 12

25. If $(a - b) = 2$, $ab = 24$, find $(a^4 - b^4)$

(i) 1043 (ii) 1040 (iii) 1037 (iv) 1039 (v) 1041

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

(i) 22029 (ii) 22031 (iii) 22034 (iv) 22032 (v) 22033

27. If $(81a^4 + 16b^4) = 20992$, $ab = 8$, find $(3a + 2b)$

(i) 13 (ii) 17 (iii) 16 (iv) 15 (v) 18

28. If $(a + b + c) = 9$, $(a^2 + b^2 + c^2) = 33$, find $(ab + ac + bc)$

(i) 23 (ii) 26 (iii) 25 (iv) 21 (v) 24

29. If $(a + b + c) = 4$, $(ab + ac + bc) = 5$, find $(a^2 + b^2 + c^2)$

(i) 9 (ii) 7 (iii) 5 (iv) 6 (v) 4

Assignment Key

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