EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Powers and Roots

Grade : ICSE Grade VI

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Find the exponential notation of

1. $\frac{16}{11} \times \frac{16}{11} \times \frac{16}{11} \times \frac{16}{11}$

(i) $\left(\frac{18}{11}\right)^4$ (ii) $\left(\frac{16}{11}\right)^5$ (iii) $\left(\frac{16}{11}\right)^4$ (iv) $\left(\frac{14}{11}\right)^4$ (v) $\left(\frac{16}{11}\right)^3$

2. Simplify the expression $(-4)^2 \times (-4)^7$

(i) $(-4)^8$ (ii) $(-2)^9$ (iii) $(-6)^9$ (iv) $(-4)^{10}$ (v) $(-4)^9$

3. The power in the term $\left(\frac{4}{3}\right)^5$ is

(i) $(\frac{-4}{3})$ (ii) $\frac{4}{3}$ (iii) 3 (iv) -5 (v) 5

4. Find the square root of $\frac{1}{9}$

(i) 1 (ii) $\frac{1}{3}$ (iii) $\frac{1}{5}$ (iv) $(\frac{-1}{3})$

5. Simplify the expression $6^2 \times 6^2 \times 5^2$

(i) 177^2 (ii) 180^2 (iii) 180^3 (iv) 180 (v) 183^2

6. Find the cube root of 125

(i) 8 (ii) 28 (iii) 2 (iv) 5 (v) 25

7. Find the cube root of 125

(i) 5 (ii) 8 (iii) 3 (iv) 6 (v) 4

8. Simplify $\frac{\sqrt{121} - \sqrt{9}}{\sqrt{144} + \sqrt{64}} =$

(i) $\frac{4}{11}$ (ii) $\frac{4}{9}$ (iii) $\frac{1}{2}$ (iv) $\frac{3}{10}$ (v) $\frac{2}{5}$

9. Find the exponential notation of
$(\frac{-8}{9}) \times (\frac{-8}{9}) \times (\frac{-8}{9}) \times (\frac{-8}{9}) \times (\frac{-8}{9}) \times (\frac{-8}{9})$

(i) $(\frac{-2}{3})^{6}$ (ii) $(\frac{-10}{9})^{6}$ (iii) $(\frac{-8}{9})^{6}$ (iv) $(\frac{-8}{9})^{5}$ (v) $(\frac{-8}{9})^{7}$

10. Find the exponential notation of
$14 \times 14 \times 14 \times 14$

(i) 14^4 (ii) 14^5 (iii) 17^4 (iv) 11^4 (v) 14^3

11. Simplify the expression $(-4)^9 \times (-3)^9$

(i) 12^{10} (ii) 15^9 (iii) 12^9 (iv) 12^8 (v) 10^9

12. Simplify the expression $5^2 \times 5^3 \times 5^3$

(i) 2^8 (ii) 5^8 (iii) 5^9 (iv) 8^8 (v) 5^7

13. Expand the following base power $(-2)^2$

(i) 1 (ii) 25 (iii) 4 (iv) -2 (v) -8

14. The power in the term 2^4 is

(i) 2 (ii) -4 (iii) -2 (iv) 4

15. $0^0 =$

(i) ∞ (ii) 0 (iii) 1 (iv) undefined (v) -1

16. Simplify the expression $3^3 \times 3^3$

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

17. Find the cube of 29

(i) 844 (ii) 24386 (iii) 841 (iv) 24389 (v) 24392

18. Find the square root of 25

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

19. $-1^{10} =$

(i) undefined (ii) 1 (iii) ∞ (iv) -1 (v) 0

20. $0^1 =$

(i) undefined (ii) 1 (iii) 0 (iv) -1 (v) ∞

21. Expand the following base power 5^4

(i) 125 (ii) 16 (iii) 3125 (iv) 2401 (v) 625

22. Simplify the expression $(-4)^3 \times (-6)^3$

(i) 24^4 (ii) 22^3 (iii) 26^3 (iv) 24^2 (v) 24^3

23. $-3^0 =$

(i) undefined (ii) 0 (iii) 1 (iv) ∞ (v) -1

24. The base in the term 4^5 is

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

Find the exponential notation of

25. $\frac{9}{2} \times \frac{9}{2} \times \frac{9}{2}$

(i) $\left(\frac{9}{2}\right)^4$ (ii) $\left(\frac{9}{2}\right)^3$ (iii) $\left(\frac{7}{2}\right)^3$ (iv) $\left(\frac{9}{2}\right)^2$ (v) $\left(\frac{11}{2}\right)^3$

Assignment Key

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