EduSahara™ Assignment

Name : Laws of Exponents

Chapter : Exponents and Powers

Grade : CBSE Grade VII

1. $(-6 \times 2)^{-9} =$

(i) $(-6)^{-9} \times 5^{-9}$ (ii) $(-6)^{-9} \times 2^{-11}$ (iii) $(-6)^{-9} \times 2^{-9}$ (iv) $(-6)^{-9} \times 2^{-8}$ (v) $(-6)^{-9} \times 2^{-10}$

2. $(-3 \times 6 \times -9)^{-8} =$

(i) $(-3)^{-8} \times 4^{-8} \times (-11)^{-8}$ (ii) $(-3)^{-8} \times 6^{-8} \times (-9)^{-8}$ (iii) $(-3)^{-8} \times 6^{-7} \times (-9)^{-7}$ (iv) $(-3)^{-8} \times 8^{-8} \times (-6)^{-8}$

(v) $(-3)^{-8} \times 6^{-9} \times (-9)^{-9}$

3. $(\frac{5}{3} \times \frac{6}{1})^{6} =$

(i) $(\frac{5}{3})^{6} \times 9^{6}$ (ii) $(\frac{5}{3})^{6} \times 6^{5}$ (iii) $(\frac{5}{3})^{6} \times 6^{6}$ (iv) $(\frac{5}{3})^{6} \times 3^{6}$ (v) $(\frac{5}{3})^{6} \times 6^{7}$

4. $((\frac{-7}{5}) \times (\frac{-4}{3}) \times \frac{-5}{1})^{-7} =$

(i) $(\frac{-7}{5})^{-7} \times (\frac{-4}{3})^{-7} \times (-5)^{-7}$ (ii) $(\frac{-7}{5})^{-7} \times (-2)^{-7} \times (-7)^{-7}$ (iii) $(\frac{-7}{5})^{-7} \times (\frac{-4}{3})^{-6} \times (-5)^{-6}$

(iv) $(\frac{-7}{5})^{-7} \times (\frac{-2}{3})^{-7} \times (-2)^{-7}$ (v) $(\frac{-7}{5})^{-7} \times (\frac{-4}{3})^{-8} \times (-5)^{-8}$

5. $(\frac{-2}{7})^{3} =$

(i) $\frac{(-2)^3}{5^3}$ (ii) $\frac{(-2)^2}{7^3}$ (iii) $\frac{(-2)^4}{7^3}$ (iv) $\frac{(-2)^3}{7^3}$ (v) $\frac{(-2)^3}{10^3}$

6. $(\frac{3}{2})^{-2} =$

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

7. $2^4 =$

(i) $\left(\frac{3}{2}\right)^{-4}$ (ii) $\left(\frac{1}{2}\right)^{-3}$ (iii) $\left(\frac{-1}{2}\right)^{-4}$ (iv) $\left(\frac{1}{2}\right)^{-4}$ (v) $\left(\frac{1}{2}\right)^{-5}$

8. $(-7)^{-6} =$

(i) $\left(\frac{-3}{7}\right)^{6}$ (ii) $\left(\frac{-1}{7}\right)^{7}$ (iii) $\left(\frac{-1}{7}\right)^{5}$ (iv) $\left(\frac{-1}{7}\right)^{6}$ (v) $\left(\frac{1}{7}\right)^{6}$

9. $\left(\frac{-2}{9}\right)^{9} =$

(i) $\left(\frac{-9}{2}\right)^{-8}$ (ii) $\left(\frac{-9}{2}\right)^{-9}$ (iii) $\left(\frac{-11}{2}\right)^{-9}$ (iv) $\left(\frac{-9}{2}\right)^{-10}$ (v) $\left(\frac{-7}{2}\right)^{-9}$

10. $\frac{2^2}{2^9} =$

(i) 2^{-6} (ii) 2^{-8} (iii) 2^{-7} (iv) 4^{-7} (v) $(-1)^{-7}$

$\left(\frac{-8}{5}\right)^{-8}$

11. $\frac{\left(\frac{-8}{5}\right)^{-8}}{-3} =$

$\left(\frac{-8}{5}\right)$

(i) $\left(\frac{-8}{5}\right)^{-4}$ (ii) $\left(\frac{-8}{5}\right)^{-6}$ (iii) $\left(\frac{-6}{5}\right)^{-5}$ (iv) $(-2)^{-5}$ (v) $\left(\frac{-8}{5}\right)^{-5}$

12. $[2^3]^2 =$

(i) 2^7 (ii) 2^3 (iii) 4^6 (iv) 2^6 (v) 2^5

13. $[7^{-2}]^2 =$

(i) 5^{-4} (ii) 7^{-4} (iii) 10^{-4} (iv) 7^{-5} (v) 7^{-3}

14. Simplify the expression $7^{4} \times 7^{4}$

(i) 9^{8} (ii) 4^{8} (iii) 7^{8} (iv) 7^{7} (v) 7^{9}

15. Simplify the expression $7^{-5} \times 7^{-5} \times 7^{-5}$

(i) 7^{-16} (ii) 7^{-14} (iii) 5^{-15} (iv) 7^{-15} (v) 10^{-15}

16. Simplify the expression $(-2)^{8} \times (-2)^{8}$

(i) $(-2)^{16}$ (ii) $(-2)^{15}$ (iii) $(-4)^{16}$ (iv) $(-2)^{17}$ (v) $(-2)^{18}$

17. Simplify the expression $(-5)^{-4} \times (-5)^{-4}$

(i) $(-8)^{-8}$ (ii) $(-2)^{-8}$ (iii) $(-5)^{-7}$ (iv) $(-5)^{-9}$ (v) $(-5)^{-8}$

18. Simplify the expression $\left(\frac{8}{3}\right)^{7} \times \left(\frac{8}{3}\right)^{7} \times \left(\frac{8}{3}\right)^{7}$

(i) $\left(\frac{8}{3}\right)^{21}$ (ii) 2^{21} (iii) $\left(\frac{8}{3}\right)^{20}$ (iv) $\left(\frac{10}{3}\right)^{21}$ (v) $\left(\frac{8}{3}\right)^{22}$

19. Simplify the expression $\left(\frac{5}{2}\right)^{-3} \times \left(\frac{5}{2}\right)^{-3} \times \left(\frac{5}{2}\right)^{-3}$

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

20. Simplify the expression $3^{7} \times 3^{3}$

(i) 3^{10} (ii) 3^{9} (iii) 3^{7} (iv) 6^{10} (v) 3^{11}

21. Simplify the expression $9^{-7} \times 9^{-3}$

(i) 9^{-11} (ii) 6^{-10} (iii) 11^{-10} (iv) 9^{-10} (v) 9^{-9}

22. Simplify the expression $(-2)^{2} \times (-2)^{6} \times (-2)^{7}$

(i) $(-2)^{15}$ (ii) $(-2)^{14}$ (iii) $(-5)^{15}$ (iv) $(-2)^{16}$ (v) $(-2)^{18}$

23. Simplify the expression $(-5)^{-5} \times (-5)^{-5} \times (-5)^{-3}$

(i) $(-8)^{-13}$ (ii) $(-5)^{-14}$ (iii) $(-2)^{-13}$ (iv) $(-5)^{-12}$ (v) $(-5)^{-13}$

24. Simplify the expression $8^{6} \times 8^{3} \times 8^{5}$

(i) 8^{15} (ii) 8^{14} (iii) 11^{14} (iv) 8^{13} (v) 6^{14}

25. Simplify the expression $6^{7} \times 3^{7} \times 5^{7}$

(i) 90^{7} (ii) 90^{8} (iii) 92^{7} (iv) 87^{7} (v) 90^{6}

26. Simplify the expression $5^{-5} \times 6^{-5}$

(i) 30^{-4} (ii) 27^{-5} (iii) 30^{-6} (iv) 32^{-5} (v) 30^{-5}

27. $3b^{4}.7b^{3} =$

(i) $10b^{12}$ (ii) $21b^{12}$ (iii) $10b^{7}$ (iv) $7b^{21}$ (v) $21b^{7}$

28. $4g^{9}.8g^{4}.9g^{4} =$

(i) $21g^{144}$ (ii) $21g^{17}$ (iii) $17g^{288}$ (iv) $288g^{17}$ (v) $288g^{144}$

29. $7n^{6}.8n^{9}.2n^{8}.9n^{9} =$

(i) $504n^{486}$ (ii) $24n^{486}$ (iii) $1008n^{32}$ (iv) $24n^{23}$ (v) $23n^{504}$

30. $-4e^{(-5)}.-9e^{(-6)} =$

(i) $36e^{30}$ (ii) $-13e^{30}$ (iii) $-13e^{(-11)}$ (iv) $36e^{(-11)}$ (v) $-11e^{36}$

Assignment Key

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