EduSahara™ Assignment

Name : Exponents Concepts

Chapter : Exponents

Grade : ICSE Grade VIII

1. The base in the term 6^5 is

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

2. The exponent in the term 9^5 is

   (i) 9 (ii) -5 (iii) 5 (iv) 2 (v) -9

3. The power in the term 5^7 is

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

4. The base in the term $\left(\frac{8}{5}\right)^5$ is

   (i) $\frac{6}{5}$ (ii) -5 (iii) 5 (iv) $(\frac{-8}{5})$ (v) $\frac{8}{5}$

5. The exponent in the term $\left(\frac{9}{7}\right)^6$ is

   (i) -6 (ii) $\frac{9}{7}$ (iii) $(\frac{-9}{7})$ (iv) 4 (v) 6

6. The power in the term $\left(\frac{9}{8}\right)^8$ is

   (i) 6 (ii) 8 (iii) -8 (iv) $\frac{9}{8}$ (v) $(\frac{-9}{8})$

7. The base in the term $\left(\frac{7}{4}\right)_7$ is

   (i) $\frac{7}{4}$ (ii) -7 (iii) 7 (iv) $(\frac{-7}{4})$ (v) 4

8. The exponent in the term $\left(\frac{8}{7}\right)_3$ is

   (i) $\frac{8}{7}$ (ii) 3 (iii) $\frac{6}{7}$ (iv) -3 (v) $(\frac{-8}{7})$

9. The power in the term $3^{(\frac{3}{2})}$ is

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

10. The base in the term $3^{(\frac{9}{2})}$ is

(i) $(\frac{-9}{2})$ (ii) $\frac{9}{2}$ (iii) 0 (iv) -3 (v) $\frac{3}{1}$

11. The exponent in the term $(\frac{5}{3})^{(7/3)}$ is

(i) $\frac{5}{3}$ (ii) $(\frac{-5}{3})$ (iii) $(\frac{-7}{3})$ (iv) $\frac{7}{3}$

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

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

13. $(-7 \times -3)^{6} =$

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

14. $(-3 \times -5 \times 7)^{-8} =$

(i) $(-3)^{-8} \times (-3)^{-8} \times 10^{-8}$ (ii) $(-3)^{-8} \times (-7)^{-8} \times 4^{-8}$ (iii) $(-3)^{-8} \times (-5)^{-7} \times 7^{-7}$ (iv) $(-3)^{-8} \times (-5)^{-8} \times 7^{-8}$

(v) $(-3)^{-8} \times (-5)^{-9} \times 7^{-9}$

15. $(7 \times 2)^{-2/9} =$

(i) $7^{(\frac{-2}{9})} \times 2^{(\frac{-2}{11})}$ (ii) $7^{(\frac{-2}{9})} \times 2^{(\frac{-4}{9})}$ (iii) $7^{(\frac{-2}{9})} \times 2^{(\frac{-2}{7})}$ (iv) $7^{(\frac{-2}{9})} \times 4^{(\frac{-2}{9})}$ (v) $7^{(\frac{-2}{9})} \times 2^{(\frac{-2}{9})}$

16. $(5 \times 2 \times 7)^{-3/5} =$

(i) $\left(\frac{-3}{5}\right)_{5} \times 2^{-1} \times 7^{-1}$ (ii) $\left(\frac{-3}{5}\right)_{5} \times_{5} \times_{10}$ (iii) $\left(\frac{-3}{5}\right)_{5} \times_{(-1)} \times_{5}$ (iv) $\left(\frac{-3}{5}\right)_{5} \times_{2} \times_{7}$

(v) $\left(\frac{-3}{5}\right)_{5} \times_{2} \times_{7}$

17. $\left(\frac{5}{3} \times \left(\frac{-6}{5}\right)\right)^{6/5} =$

(i) $\left(\frac{5}{3}\right)^{(6/5)} \times \left(\frac{-4}{5}\right)^{(6/5)}$ (ii) $\left(\frac{5}{3}\right)^{(6/5)} \times \left(\frac{-6}{5}\right)^{(6/7)}$ (iii) $\left(\frac{5}{3}\right)^{(6/5)} \times \left(\frac{-6}{5}\right)^{(6/5)}$ (iv) $\left(\frac{5}{3}\right)^{(6/5)} \times \left(\frac{-8}{5}\right)^{(6/5)}$

(v) $\left(\frac{5}{3}\right)^{(6/5)} \times \left(\frac{-6}{5}\right)^{2}$

18. $\left(\left(\frac{-3}{8}\right) \times \left(\frac{-4}{5}\right) \times \left(\frac{-3}{8}\right)\right)^{6} =$

(i) $\left(\frac{-3}{8}\right)^{6} \times \left(\frac{-4}{5}\right)^{6} \times \left(\frac{-3}{8}\right)^{6}$ (ii) $\left(\frac{-3}{8}\right)^{6} \times \left(\frac{-4}{5}\right)^{5} \times \left(\frac{-3}{8}\right)^{5}$ (iii) $\left(\frac{-3}{8}\right)^{6} \times \left(\frac{-4}{5}\right)^{7} \times \left(\frac{-3}{8}\right)^{7}$

(iv) $\left(\frac{-3}{8}\right)^{6} \times \left(\frac{-6}{5}\right)^{6} \times \left(\frac{-5}{8}\right)^{6}$ (v) $\left(\frac{-3}{8}\right)^{6} \times \left(\frac{-2}{5}\right)^{6} \times \left(\frac{-1}{8}\right)^{6}$

19. $\left(\frac{6}{5}\right)^{7} =$

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

20. $3^{-2} =$

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

21. $\left(\frac{-6}{7}\right)^{(4/3)}$ =

(i) $\frac{(-6)^{\left(\frac{4}{3}\right)}}{7^{\left(\frac{4}{3}\right)}}$ (ii) $\frac{(-6)^{\left(\frac{4}{5}\right)}}{7^{\left(\frac{4}{3}\right)}}$ (iii) $\frac{(-6)^4}{7^{\left(\frac{4}{3}\right)}}$ (iv) $\frac{(-6)^{\left(\frac{4}{3}\right)}}{9^{\left(\frac{4}{3}\right)}}$ (v) $\frac{(-6)^{\left(\frac{4}{3}\right)}}{5^{\left(\frac{4}{3}\right)}}$

22. $\left(\frac{-8}{7}\right)^{(-2/7)}$ =

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

23. 6^4 =

(i) $\left(\frac{1}{2}\right)^{-4}$ (ii) $\left(\frac{1}{6}\right)^{-4}$ (iii) $\left(\frac{-1}{6}\right)^{-4}$ (iv) $\left(\frac{1}{6}\right)^{-5}$ (v) $\left(\frac{1}{6}\right)^{-3}$

24. 7^{-9} =

(i) $\left(\frac{-1}{7}\right)^{9}$ (ii) $\left(\frac{1}{7}\right)^{9}$ (iii) $\left(\frac{1}{7}\right)^{8}$ (iv) $\left(\frac{3}{7}\right)^{9}$ (v) $\left(\frac{1}{7}\right)^{10}$

25. $\left(\frac{-5}{2}\right)^{4}$ =

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

26. $\left(\frac{-6}{7}\right)^{-9}$ =

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

27. $\frac{5^{-3}}{5^{-3}}$ =

(i) 5^{3} (ii) 1 (iii) 5^{-1} (iv) 5^{-3} (v) 5

28. $\frac{\left(\frac{-9}{2}\right)^{6}}{\left(\frac{-9}{2}\right)^{4}}$ =

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

29. $\frac{\left(\frac{-3}{5}\right)^{3}}{\left(\frac{5}{2}\right)^{3}}$ =

(i) $\left(\frac{-25}{8}\right)^{3}$ (ii) 1 (iii) $\left(\frac{-31}{10}\right)^{5}$ (iv) $\left(\frac{-37}{12}\right)^{3}$ (v) $\left(\frac{-31}{10}\right)^{3}$

$\left(\frac{9}{7}\right)^{(-3/4)}$

30. $\frac{}{(-3/5)}$ =

$\left(\frac{9}{7}\right)$

(i) 1 (ii) $\left(\frac{9}{7}\right)^{(-3/20)}$ (iii) $\left(\frac{9}{7}\right)^{(-3/22)}$ (iv) $\left(\frac{11}{7}\right)^{(-3/20)}$ (v) $\left(\frac{9}{7}\right)^{(-1/6)}$

31. $[3^{-2}]^{-5}$ =

(i) 3^{11} (ii) 5^{10} (iii) 1 (iv) 3^{9} (v) 3^{10}

32. $[(-5)^{2}]^{-5/2}$ =

(i) $(-5)^{-5}$ (ii) $(-8)^{-5}$ (iii) $(-5)^{-6}$ (iv) $(-5)^{-4}$ (v) $(-3)^{-5}$

33. $[2^{5}]^{-5}$ =

(i) 2^{-26} (ii) 4^{-25} (iii) 2^{-25} (iv) $(-1)^{-25}$ (v) 2^{-24}

34. $\left[\left(\frac{5}{2}\right)_{6}\right]^{5/2}$ =

(i) $\left(\frac{25}{4}\right)_{4}$ (ii) $\left(\frac{25}{4}\right)_{6}$ (iii) $\left(\frac{37}{6}\right)_{6}$ (iv) $\left(\frac{13}{2}\right)_{6}$ (v) $\left(\frac{25}{4}\right)_{9}$

35. $\left[\left(\frac{-9}{7}\right)^{-3}\right]^{5}$ =

(i) $\left(\frac{-11}{7}\right)^{-15}$ (ii) $\left(\frac{-9}{7}\right)^{-15}$ (iii) $(-1)^{-15}$ (iv) $\left(\frac{-9}{7}\right)^{-14}$ (v) $\left(\frac{-9}{7}\right)^{-16}$

36. $\left[\left(\frac{9}{7}\right)^{-3}\right]^{-5/4}$ =

(i) $\left(\frac{9}{7}\right)^{(7/2)}$ (ii) 1 (iii) $\left(\frac{11}{7}\right)^{(15/4)}$ (iv) $\left(\frac{9}{7}\right)^{(9/2)}$ (v) $\left(\frac{9}{7}\right)^{(15/4)}$

37. $\left[\left(\frac{9}{2}\right)^{(-5/2)}\right]^{-2}$ =

(i) $\left(\frac{11}{2}\right)^{5}$ (ii) $\left(\frac{7}{2}\right)^{5}$ (iii) $\left(\frac{9}{2}\right)^{4}$ (iv) $\left(\frac{9}{2}\right)^{5}$ (v) $\left(\frac{9}{2}\right)^{6}$

38. $\left[\left(\frac{3}{2}\right)^{(5/2)}\right]^{2}$ =

(i) $\left(\frac{3}{2}\right)^{6}$ (ii) $\left(\frac{1}{2}\right)^{5}$ (iii) $\left(\frac{3}{2}\right)^{4}$ (iv) $\left(\frac{5}{2}\right)^{5}$ (v) $\left(\frac{3}{2}\right)^{5}$

39. The multiplicative inverse of 4^{-4} is

(i) 4^{4} (ii) 1 (iii) 0 (iv) $(-4)^{-4}$ (v) $\left(\frac{1}{4}\right)^{4}$

40. The multiplicative inverse of $\left(\frac{1}{2}\right)^{6}$ is

(i) 0 (ii) $\left(\frac{1}{2}\right)^{-6}$ (iii) $\left(\frac{-1}{2}\right)^{6}$ (iv) 1 (v) 2^{-6}

41. Which of the following statements are true?

a) $a.x^{m} = a^{m}.x^{m}$

b) $a^{m}.a^{n} = a^{mn}$

c) $\left(x^{m}\right)^{n} = x^{(m+n)}$

d) $a^{0} = 1 \ (a \neq 0)$

e) $\left(x^{m}\right)^{n} = \left(x^{n}\right)^{m}$

f) $\frac{x^{m}}{x^{n}} = x^{\frac{m}{n}}$

(i) {c,f,d} (ii) {a,d} (iii) {a,e,d} (iv) {b,e} (v) {d,e}

42. -1^{2} =

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

43. $-1^5 =$

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

44. $5^0 =$

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

45. $0^0 =$

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

46. $-5^0 =$

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

47. $0^5 =$

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

48. $\sqrt{\frac{9}{16}} =$

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

49. Find the reciprocal of 5^2

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

50. Find the reciprocal of $\left(\frac{-4}{5}\right)^7$

(i) $\left(\frac{-7}{4}\right)^7$ (ii) $\left(\frac{-5}{4}\right)^8$ (iii) $\left(\frac{-3}{4}\right)^7$ (iv) $\left(\frac{-5}{4}\right)^7$ (v) $\left(\frac{-5}{4}\right)^6$

Assignment Key

1) (v)	2) (iii)	3) (v)	4) (v)	5) (v)	6) (ii)
7) (iii)	8) (i)	9) (iv)	10) (v)	11) (iv)	12) (i)
13) (ii)	14) (iv)	15) (v)	16) (iv)	17) (iii)	18) (i)
19) (ii)	20) (ii)	21) (i)	22) (iv)	23) (ii)	24) (ii)
25) (ii)	26) (v)	27) (ii)	28) (v)	29) (v)	30) (ii)
31) (v)	32) (i)	33) (iii)	34) (ii)	35) (ii)	36) (v)
37) (iv)	38) (v)	39) (i)	40) (ii)	41) (v)	42) (i)
43) (iii)	44) (ii)	45) (ii)	46) (ii)	47) (ii)	48) (iii)
49) (i)	50) (iv)				