EduSahara™ Assignment

Name : Finding Values of Expressions

Chapter : Exponents and Powers

Grade : CBSE Grade VIII

1. Expand the following base power 2^{5}

(i) 64 (ii) 16 (iii) 4 (iv) 3125 (v) 32

2. Expand the following base power 3^{-4}

(i) $\frac{1}{27}$ (ii) $\frac{1}{2187}$ (iii) $\frac{1}{243}$ (iv) $\frac{1}{81}$ (v) $\frac{1}{625}$

3. Expand the following base power $(-2)^{2}$

(i) 4 (ii) -8 (iii) 25 (iv) -2 (v) 16

4. Expand the following base power $(-3)^{-4}$

(i) $(\frac{-1}{3})$ (ii) $\frac{1}{625}$ (iii) $(\frac{-1}{27})$ (iv) $(\frac{-1}{243})$ (v) $\frac{1}{81}$

5. $3^{-7} =$

(i) $\left(\frac{-1}{3}\right)^{7}$ (ii) $\left(\frac{1}{3}\right)^{8}$ (iii) $\left(\frac{1}{3}\right)^{6}$ (iv) 1 (v) $\left(\frac{1}{3}\right)^{7}$

6. Expand the following base power $\left(\frac{5}{4}\right)^{4}$

(i) $\frac{3125}{1024}$ (ii) $\frac{625}{256}$ (iii) $\frac{125}{64}$ (iv) $\frac{81}{256}$ (v) $\frac{2401}{256}$

7. Expand the following base power $\left(\frac{5}{4}\right)^{-5}$

(i) $\frac{256}{625}$ (ii) $\frac{1024}{243}$ (iii) $\frac{1024}{3125}$ (iv) $\frac{4096}{15625}$ (v) $\frac{1024}{16807}$

8. Expand the following base power $\left(\frac{-5}{4}\right)^{5}$

(i) $(\frac{-243}{1024})$ (ii) $(\frac{-16807}{1024})$ (iii) $\frac{625}{256}$ (iv) $\frac{15625}{4096}$ (v) $(\frac{-3125}{1024})$

9. Expand the following base power $\left(\frac{-4}{5}\right)^{-3}$

(i) $(\frac{-125}{8})$ (ii) $\frac{625}{256}$ (iii) $(\frac{-125}{216})$ (iv) $\frac{25}{16}$ (v) $(\frac{-125}{64})$

10. The value of $3^2 + 3^2$

(i) 16 (ii) 17 (iii) 18 (iv) 21 (v) 18^2

11. The value of $2^{-3} + (-3)^{-3}$

(i) $\frac{17}{216}$ (ii) $\frac{19}{214}$ (iii) $\frac{7}{72}$ (iv) $\frac{19}{216}$ (v) $\left(\frac{19}{216}\right)^2$

12. The value of $\left(\frac{2}{3}\right)^2 + \left(\frac{1}{2}\right)^3$

(i) $\frac{41}{70}$ (ii) $\frac{41}{72}$ (iii) $\left(\frac{41}{72}\right)^2$ (iv) $\frac{13}{24}$ (v) $\frac{43}{72}$

13. The value of $\left(\frac{1}{3}\right)^{-3} + \left(\frac{3}{2}\right)^{-3}$

(i) $\frac{737}{27}$ (ii) $\frac{245}{9}$ (iii) $\frac{737}{25}$ (iv) $\frac{739}{27}$ (v) $\left(\frac{737}{27}\right)^2$

14. The value of $3^2 - (-5)^2$

(i) -19 (ii) -16 (iii) -17 (iv) $(-16)^2$ (v) -13

15. The value of $5^{-2} - 4^{-2}$

(i) $\left(\frac{-9}{400}\right)^2$ (ii) $(\frac{-9}{398})$ (iii) $(\frac{-9}{400})$ (iv) $(\frac{-11}{400})$ (v) $(\frac{-7}{400})$

16. The value of $\left(\frac{-4}{3}\right)^{3} - \left(\frac{-5}{2}\right)^{2}$

(i) $\left(\frac{-931}{108}\right)^{2}$ (ii) $\left(\frac{-931}{108}\right)$ (iii) $\left(\frac{-311}{36}\right)$ (iv) $\left(\frac{-931}{106}\right)$ (v) $\left(\frac{-929}{108}\right)$

17. The value of $\left(\frac{-5}{3}\right)^{-2} - \left(\frac{5}{2}\right)^{-3}$

(i) $\frac{7}{25}$ (ii) $\frac{37}{125}$ (iii) $\frac{37}{123}$ (iv) $\frac{39}{125}$ (v) $\left(\frac{37}{125}\right)^{2}$

18. The value of $4^{3} \times (-2)^{2}$

(i) 256 (ii) 254 (iii) 255 (iv) 259 (v) 256^{2}

19. The value of $(-4)^{-3} \times (-4)^{-3}$

(i) 4098^{-1} (ii) 4096^{-2} (iii) 4096^{-1} (iv) 4093^{-1} (v) 4097^{-1}

20. The value of $\left(\frac{-1}{3}\right)^{3} \times \left(\frac{5}{2}\right)^{3}$

(i) $\left(\frac{-127}{216}\right)$ (ii) $\left(\frac{-125}{214}\right)$ (iii) $\left(\frac{-125}{216}\right)$ (iv) $\left(\frac{-125}{216}\right)^{2}$ (v) $\left(\frac{-41}{72}\right)$

21. The value of $\left(\frac{4}{3}\right)^{-2} \times \left(\frac{-3}{2}\right)^{-3}$

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

22. The value of $5^{2} \div 4^{2}$

(i) $\left(\frac{25}{16}\right)^{2}$ (ii) $\frac{25}{14}$ (iii) $\frac{27}{16}$ (iv) $\frac{25}{16}$ (v) $\frac{23}{16}$

23. The value of $(-3)^{-2} \div (-5)^{-3}$

(i) $(\frac{-125}{9})$ (ii) $(\frac{-127}{9})$ (iii) $(\frac{-125}{7})$ (iv) $\left(\frac{-125}{9}\right)^{2}$ (v) $(\frac{-41}{3})$

24. The value of $\left(\frac{5}{2}\right)^{3} \div \left(\frac{-5}{2}\right)^{3}$

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

25. The value of $\left(\frac{-5}{3}\right)^{-3} \div \left(\frac{-2}{3}\right)^{-3}$

(i) $\frac{6}{125}$ (ii) $\frac{8}{125}$ (iii) $\frac{8}{123}$ (iv) $\left(\frac{8}{125}\right)^{2}$ (v) $\frac{2}{25}$

26. $\left(\frac{1}{3}\right)^{-3} + \left(\frac{1}{2}\right)^{-3} + \left(\frac{1}{2}\right)^{-4} + \left(\frac{1}{2}\right)^{-3} =$

(i) 57 (ii) 62 (iii) 60 (iv) 58 (v) 59

27. $\left[\left(9^{6}\right)^{5} \times \left(9^{3}\right)^{5} \right] \div 9^{45}$

(i) 2 (ii) 0 (iii) 4 (iv) 1 (v) 9

28. $\left[\left(\frac{2}{6}\right)^{-2} \times \left(\frac{7}{4}\right)^{-2} \right] \div \left[\left(\frac{6}{2}\right)^{2} \times \left(\frac{4}{7}\right)^{2} \right] =$

(i) 1 (ii) $\frac{7}{4}$ (iii) $\frac{2}{6}$ (iv) (-1) (v) 0

29. Simplify $8^{-1} + 5^{0} + 2^{1} + 6^{-1}$

(i) $\frac{79}{24}$ (ii) $\frac{27}{8}$ (iii) $\frac{77}{24}$ (iv) $\frac{85}{26}$ (v) $\frac{73}{22}$

Assignment Key

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