EduSahara™ Assignment

Name : Finding Values of Expressions

Chapter : Exponents and Powers

Grade : CBSE Grade VIII

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

(i) 15625 (ii) 3125 (iii) 32768 (iv) 625 (v) 243

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

(i) $\frac{1}{32768}$ (ii) $\frac{1}{15625}$ (iii) $\frac{1}{3125}$ (iv) $\frac{1}{243}$ (v) $\frac{1}{625}$

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

(i) 25 (ii) -27 (iii) 9 (iv) -3 (v) -243

4. Expand the following base power $(-5)^{-3}$

(i) $(\frac{-1}{125})$ (ii) $\frac{1}{625}$ (iii) $\frac{1}{25}$ (iv) $(\frac{-1}{27})$ (v) $(\frac{-1}{343})$

5. $7^{-8} =$

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

6. Expand the following base power $\left(\frac{2}{3}\right)^{3}$

(i) $\frac{2}{3}$ (ii) $\frac{16}{81}$ (iii) $\frac{4}{9}$ (iv) $\frac{64}{27}$ (v) $\frac{8}{27}$

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

(i) $\frac{1}{32}$ (ii) $\frac{243}{1024}$ (iii) $\frac{729}{4096}$ (iv) $\frac{243}{32}$ (v) $\frac{81}{256}$

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

(i) $(\frac{-243}{1024})$ (ii) $\frac{625}{256}$ (iii) $\frac{81}{256}$ (iv) $\frac{1}{256}$ (v) $(\frac{-27}{64})$

9. Expand the following base power $\left(\frac{-1}{5}\right)^{-3}$

(i) 625 (ii) $(\frac{-125}{27})$ (iii) -125 (iv) 25 (v) 125

10. The value of $5^3 + (-3)^3$

(i) 101 (ii) 97 (iii) 98^2 (iv) 98 (v) 95

11. The value of $(-2)^{-2} + 5^{-2}$

(i) $\left(\frac{29}{100}\right)^2$ (ii) $\frac{29}{98}$ (iii) $\frac{27}{100}$ (iv) $\frac{29}{100}$ (v) $\frac{31}{100}$

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

(i) 3 (ii) $\left(\frac{83}{27}\right)^2$ (iii) $\frac{83}{25}$ (iv) $\frac{85}{27}$ (v) $\frac{83}{27}$

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

(i) $\frac{211}{25}$ (ii) $\frac{207}{25}$ (iii) $\frac{209}{25}$ (iv) $\frac{209}{23}$ (v) $\left(\frac{209}{25}\right)^2$

14. The value of $4^2 - 2^2$

(i) 11 (ii) 10 (iii) 12 (iv) 12^2 (v) 15

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

(i) $\frac{3}{14}$ (ii) $\frac{1}{16}$ (iii) $\frac{3}{16}$ (iv) $\left(\frac{3}{16}\right)^2$ (v) $\frac{5}{16}$

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

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

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

(i) $\frac{187}{100}$ (ii) $\left(\frac{189}{100}\right)^{2}$ (iii) $\frac{189}{100}$ (iv) $\frac{191}{100}$ (v) $\frac{27}{14}$

18. The value of $4^{2} \times 5^{2}$

(i) 400^{2} (ii) 400 (iii) 399 (iv) 403 (v) 397

19. The value of $5^{-2} \times 2^{-2}$

(i) 101^{-1} (ii) 100^{-1} (iii) 98^{-1} (iv) 100^{-2} (v) 103^{-1}

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

(i) $\left(\frac{-41}{24}\right)$ (ii) $\left(\frac{-125}{72}\right)$ (iii) $\left(\frac{-125}{72}\right)^{2}$ (iv) $\left(\frac{-25}{14}\right)$ (v) $\left(\frac{-127}{72}\right)$

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

(i) $\left(\frac{-729}{512}\right)^{2}$ (ii) $\left(\frac{-729}{512}\right)$ (iii) $\left(\frac{-243}{170}\right)$ (iv) $\left(\frac{-731}{512}\right)$ (v) $\left(\frac{-727}{512}\right)$

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

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

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

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

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

(i) $\frac{225}{4}$ (ii) $\frac{225}{2}$ (iii) $\frac{227}{4}$ (iv) $\left(\frac{225}{4}\right)^{2}$ (v) $\frac{223}{4}$

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

(i) $\left(\frac{9}{16}\right)^{2}$ (ii) $\frac{9}{14}$ (iii) $\frac{11}{16}$ (iv) $\frac{9}{16}$ (v) $\frac{7}{16}$

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

(i) 19 (ii) 17 (iii) 16 (iv) 15 (v) 18

27. $\left[\left(9^{5}\right)^{3} \times \left(9^{5}\right)^{2}\right] \div 9^{25}$

(i) 3 (ii) 9 (iii) 0 (iv) 2 (v) 1

28. $\left[\left(\frac{6}{4}\right)^{-5} \times \left(\frac{5}{7}\right)^{-5}\right] \div \left[\left(\frac{4}{6}\right)^{5} \times \left(\frac{7}{5}\right)^{5}\right] =$

(i) $\frac{5}{7}$ (ii) 0 (iii) 1 (iv) $\frac{6}{4}$ (v) (-1)

29. Simplify $7^{-1} + 6^{0} + 4^{1} + 3^{-1}$

(i) $\frac{115}{21}$ (ii) $\frac{105}{19}$ (iii) $\frac{125}{23}$ (iv) $\frac{113}{21}$ (v) $\frac{39}{7}$

Assignment Key

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