EduSahara™ Assignment

Name : Evaluation of Base Power Expressions

Chapter : Exponents and Powers

Grade : CBSE Grade VII

1. Expand the following base power 4^{4}

   (i) 64 (ii) 1296 (iii) 1024 (iv) 256 (v) 1

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

   (i) $\frac{1}{64}$ (ii) $\frac{1}{343}$ (iii) $\frac{1}{256}$ (iv) $\frac{1}{16}$ (v) 1

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

   (i) 6561 (ii) 729 (iii) 81 (iv) -243 (v) -7776

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

   (i) $\frac{1}{4096}$ (ii) $\frac{1}{256}$ (iii) $(\frac{-1}{1024})$ (iv) -1 (v) $(\frac{-1}{7776})$

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

   (i) $\frac{729}{4096}$ (ii) $\frac{243}{1024}$ (iii) $\frac{3125}{1024}$ (iv) $\frac{81}{256}$ (v) $\frac{1}{1024}$

6. Expand the following base power $\left(\frac{2}{3}\right)^{-4}$

   (i) $\frac{243}{32}$ (ii) $\frac{81}{16}$ (iii) $\frac{81}{256}$ (iv) $\frac{27}{8}$ (v) $\frac{2187}{128}$

7. Expand the following base power $\left(\frac{-3}{2}\right)^{4}$

   (i) $(\frac{-243}{32})$ (ii) $\frac{625}{16}$ (iii) $\frac{81}{16}$ (iv) $\frac{1}{16}$ (v) $(\frac{-27}{8})$

8. Expand the following base power $\left(\frac{-1}{4}\right)^{-4}$

   (i) -1024 (ii) 256 (iii) $\frac{256}{81}$ (iv) -64

9. The value of $3^2 + (-2)^3$

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

10. The value of $5^{-3} + 3^{-2}$

(i) $\frac{134}{1123}$ (ii) $\left(\frac{134}{1125}\right)^2$ (iii) $\frac{134}{1125}$ (iv) $\frac{44}{375}$ (v) $\frac{136}{1125}$

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

(i) $\frac{33}{2}$ (ii) $\frac{29}{2}$ (iii) 31 (iv) $\left(\frac{31}{2}\right)^2$ (v) $\frac{31}{2}$

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

(i) $\frac{98}{25}$ (ii) $\frac{492}{125}$ (iii) $\frac{494}{125}$ (iv) 4 (v) $\left(\frac{492}{125}\right)^2$

13. The value of $(-4)^2 - (-2)^3$

(i) 24 (ii) 23 (iii) 26 (iv) 22 (v) 24^2

14. The value of $3^{-3} - (-4)^{-3}$

(i) $\frac{91}{1726}$ (ii) $\left(\frac{91}{1728}\right)^2$ (iii) $\frac{91}{1728}$ (iv) $\frac{89}{1728}$ (v) $\frac{31}{576}$

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

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

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

(i) $\left(\frac{-209}{98}\right)$ (ii) $\left(\frac{-209}{100}\right)$ (iii) $\left(\frac{-207}{100}\right)$ (iv) $\left(\frac{-209}{100}\right)^{2}$ (v) $\left(\frac{-211}{100}\right)$

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

(i) $(-512)^{2}$ (ii) -510 (iii) -513 (iv) -512 (v) -514

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

(i) 37^{-1} (ii) 36^{-1} (iii) 38^{-1} (iv) 34^{-1} (v) 36^{-2}

19. Find the value of $25^{\left(\frac{3}{2}\right)}$

(i) 128 (ii) 123 (iii) 125 (iv) 124 (v) 126

20. Find the value of $16^{\left(\frac{-3}{2}\right)}$

(i) $\frac{1}{62}$ (ii) $\frac{1}{64}$ (iii) $\left(\frac{-1}{64}\right)$ (iv) $\frac{3}{64}$ (v) $\frac{1}{66}$

21. $\left(c^{(-5)} + d^{(-5)}\right)^{0} =$

(i) 1 (ii) 0 (iii) 4 (iv) $c^{(-5)} + d^{(-5)}$ (v) (-2)

22. $-1^{8} =$

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

23. $-1^{3} =$

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

24. $1^{0} =$

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

25. $0^{0} =$

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

26. $-7^{0} =$

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

27. $0^3 =$

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

28. Simplify $5^{-1} + 3^0 + 6^1 + 8^{-1}$

(i) $\frac{59}{8}$ (ii) $\frac{279}{38}$ (iii) $\frac{293}{40}$ (iv) $\frac{307}{42}$ (v) $\frac{291}{40}$

Assignment Key

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