



1. Expand the following base power 3^3

- (i) 1 (ii) 125 (iii) 9 (iv) 27 (v) 81

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

- (i) $\frac{1}{125}$ (ii) $\frac{1}{8}$ (iii) $\frac{1}{16}$ (iv) $\frac{1}{64}$ (v) $\frac{1}{4}$

3. Expand the following base power $(-5)^2$

- (i) 25 (ii) 9 (iii) -125 (iv) 49 (v) -5

4. Expand the following base power $(-2)^{-5}$

- (i) $(\frac{-1}{3125})$ (ii) $(\frac{-1}{32})$ (iii) 1 (iv) $\frac{1}{16}$ (v) $\frac{1}{64}$

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

- (i) $\frac{9}{4}$ (ii) $\frac{25}{4}$ (iii) $\frac{1}{4}$ (iv) $\frac{27}{8}$ (v) $\frac{3}{2}$

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

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

7. Expand the following base power $(\frac{-1}{3})^4$

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

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

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

9. The value of $5^2 \times 3^2$

- (i) 225 (ii) 225^2 (iii) 224 (iv) 227 (v) 223

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

- (i) $\left(\frac{-3}{1024}\right)$ (ii) $\left(\frac{-1}{1024}\right)^2$ (iii) $\frac{1}{1024}$ (iv) $\left(\frac{-1}{1022}\right)$ (v) $\left(\frac{-1}{1024}\right)$

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

- (i) 110^{-1} (ii) 108^{-2} (iii) 108^{-1} (iv) 106^{-1} (v) 109^{-1}

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

- (i) $\frac{241}{2000}$ (ii) $\frac{9}{74}$ (iii) $\frac{243}{2000}$ (iv) $\frac{49}{400}$ (v) $\left(\frac{243}{2000}\right)^2$

13. The value of $(-5)^3 \div 5^2$

- (i) -8 (ii) -5 (iii) -3 (iv) -6 (v) $(-5)^2$

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

- (i) $(-1)^2$ (ii) -2 (iii) 2 (iv) -1 (v) -3

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

- (i) $\left(\frac{-3375}{512}\right)$ (ii) $\left(\frac{-3375}{512}\right)^2$ (iii) $\left(\frac{-225}{34}\right)$ (iv) $\left(\frac{-3373}{512}\right)$ (v) $\left(\frac{-3377}{512}\right)$

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

- (i) $\frac{47}{8}$ (ii) $\left(\frac{45}{8}\right)^2$ (iii) $\frac{45}{8}$ (iv) $\frac{15}{2}$ (v) $\frac{43}{8}$

17. The multiplicative inverse of 6^{-8} is

- (i) $\left(\frac{1}{6}\right)^8$ (ii) 1 (iii) 0 (iv) $(-6)^{-8}$ (v) 6^8

18. The multiplicative inverse of $\left(\frac{1}{10}\right)^9$ is

- (i) $\left(\frac{-1}{10}\right)^9$ (ii) $\left(\frac{1}{10}\right)^{-9}$ (iii) 1 (iv) 0 (v) 10^{-9}

19. $\left(\frac{1}{4}\right)^{-2} + \left(\frac{1}{5}\right)^{-4} + \left(\frac{1}{4}\right)^{-2} =$

- (i) 657 (ii) 659 (iii) 656 (iv) 658 (v) 655

20. $\left(b^{-2} + c^{-2}\right)^0 =$

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

21. $-1^2 =$

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

22. $-1^7 =$

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

23. $2^0 =$

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

24. $0^0 =$

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

25. $-3^0 =$

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

26. $0^6 =$

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

27. Find the reciprocal of 8^6

- (i) $\left(\frac{3}{8}\right)^6$ (ii) $\left(\frac{-1}{8}\right)^6$ (iii) $\left(\frac{1}{8}\right)^5$ (iv) $\left(\frac{1}{8}\right)^7$ (v) $\left(\frac{1}{8}\right)^6$

28. Find the reciprocal of $\left(\frac{-8}{3}\right)^4$

- (i) $\left(\frac{-3}{8}\right)^3$ (ii) $\left(\frac{-3}{8}\right)^4$ (iii) $\left(\frac{-1}{8}\right)^4$ (iv) $\left(\frac{-3}{8}\right)^5$ (v) $\left(\frac{-5}{8}\right)^4$

29. Simplify $2^{-1} + 7^0 + 9^1 + 6^{-1}$

- (i) 10 (ii) 12 (iii) $\frac{52}{5}$ (iv) $\frac{32}{3}$ (v) $\frac{34}{3}$

Assignment Key

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