EduSahara™ Learning Center Assignment

Grade : Class VIII, CBSE
Chapter : Exponents and Powers
Name : Base Power Concepts
Licensed To : Teachers and Students for non-commercial use

---

1. $(-3 \times -4)^{-4} =$

   (i) $(-3)^{-4} \times (-1)^{-4}$ (ii) $(-3)^{-4} \times (-4)^{-4}$

   (iii) $(-3)^{-4} \times (-4)^{-5}$ (iv) $(-3)^{-4} \times (-7)^{-4}$

   (v) $(-3)^{-4} \times (-4)^{-3}$

---

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

   (i) $7^{3} \times 5^{2} \times (-3)^{2}$ (ii) $7^{3} \times 2^{3} \times (-6)^{3}$

   (iii) $7^{3} \times 5^{3} \times (-3)^{3}$ (iv) $7^{3} \times 7^{3} \times (-3)^{5}$

   (v) $7^{3} \times 5^{4} \times (-3)^{4}$

---

3. $\left(\frac{-9}{1} \times \left(\frac{-7}{9}\right) \right)^{2} =$

   (i) $(-9)^{2} \times \left(\frac{-7}{9}\right)^{3}$ (ii) $(-9)^{2} \times \left(\frac{-5}{9}\right)^{2}$

   (iii) $(-9)^{2} \times \left(\frac{-7}{9}\right)$ (iv) $(-9)^{2} \times \left(\frac{-7}{9}\right)^{2}$

   (v) $(-9)^{2} \times (-1)^{2}$

---

4. $\left(\left(\frac{-5}{6}\right) \times \left(\frac{-6}{7}\right) \times \frac{5}{1} \right)^{-4} =$

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

(iii) $\left(\frac{-5}{6}\right)^{-4} \times \left(\frac{-6}{7}\right)^{-5} \times 5^{-5}$ (iv) $\left(\frac{-5}{6}\right)^{-4} \times \left(\frac{-4}{7}\right)^{-4} \times 7^{-4}$

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

---

5. $\left(\frac{5}{3} \times \frac{7}{3}\right)^{-6} =$

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

(iii) $\left(\frac{5}{3}\right)^{-6} \times \left(\frac{5}{3}\right)^{-6}$ (iv) $\left(\frac{5}{3}\right)^{-6} \times 3^{-6}$

(v) $\left(\frac{5}{3}\right)^{-6} \times \left(\frac{7}{3}\right)^{-6}$

---

6. $\left(\frac{5}{4}\right)^{6} =$

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

---

7. $\left(\frac{-2}{9}\right)^{-2} =$

(i) $\frac{(-2)^{-2}}{9^{-2}}$ (ii) $\frac{(-2)^{-1}}{9^{-2}}$ (iii) $\frac{(-2)^{-2}}{7^{-2}}$ (iv) $\frac{(-2)^{-2}}{12^{-2}}$ (v) $\frac{(-2)^{-3}}{9^{-2}}$

---

8. 3^{3} =

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

---

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

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

---

10. $\frac{7^{-8}}{7^{6}}$ =

(i) 4^{-14} (ii) 7^{-13} (iii) 7^{-15} (iv) 9^{-14} (v) 7^{-14}

---

11. $\frac{\left(\frac{-8}{9}\right)^{8}}{\left(\frac{-8}{9}\right)^{-5}}$ =

(i) $\left(\frac{-10}{9}\right)^{13}$ (ii) $\left(\frac{-2}{3}\right)^{13}$ (iii) $\left(\frac{-8}{9}\right)^{14}$ (iv) $\left(\frac{-8}{9}\right)^{12}$ (v) $\left(\frac{-8}{9}\right)^{13}$

---

12. $\left[(-5)^{-3}\right]^{5}$ =

(i) $(-2)^{-15}$ (ii) $(-5)^{-14}$ (iii) $(-5)^{-16}$

(iv) $(-7)^{-15}$ (v) $(-5)^{-15}$

---

13. $[(-5)^{5}]^{-5/3}$ =

(i) $(-3)^{\left(\frac{-25}{3}\right)}$ (ii) $(-5)^{\left(\frac{-41}{5}\right)}$ (iii) $(-5)^{\left(\frac{-25}{3}\right)}$

(iv) $(-5)^{-9}$ (v) $(-7)^{\left(\frac{-25}{3}\right)}$

---

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

(i) $(-3)^{\left(\frac{10}{3}\right)}$ (ii) $(-1)^{\left(\frac{10}{3}\right)}$ (iii) $(-3)^{\left(\frac{16}{5}\right)}$

(iv) $(-6)^{\left(\frac{10}{3}\right)}$ (v) $(-3)^{4}$

---

15. $\left[\left(\frac{-3}{4}\right)^{2}\right]^{-2}$ =

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

(iv) $\left(\frac{-1}{4}\right)^{-4}$ (v) $\left(\frac{-5}{4}\right)^{-4}$

---

16. $\left[\left(\frac{7}{2}\right)^{-5}\right]^{-2/3}$ =

(i) $\left(\frac{9}{2}\right)^{(10/3)}$ (ii) $\left(\frac{7}{2}\right)^{(16/5)}$ (iii) $\left(\frac{5}{2}\right)^{(10/3)}$

(iv) $\left(\frac{7}{2}\right)^{4}$ (v) $\left(\frac{7}{2}\right)^{(10/3)}$

---

17. $\left[\left(\frac{5}{2}\right)^{(5/4)}\right]^{-4}$ =

(i) $\left(\frac{5}{2}\right)^{-6}$ (ii) $\left(\frac{7}{2}\right)^{-5}$ (iii) $\left(\frac{3}{2}\right)^{-5}$

(iv) $\left(\frac{5}{2}\right)^{-5}$ (v) $\left(\frac{5}{2}\right)^{-4}$

---

18. Simplify the expression $5^{7} \times 5^{7} \times 5^{7}$

(i) 5^{21} (ii) 5^{20} (iii) 7^{21}

(iv) 2^{21} (v) 5^{22}

---

19. 5^{-2} =

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

---

20. Simplify the expression $6^{-5} \times 6^{-5}$

(i) 6^{-11} (ii) 6^{-9} (iii) 3^{-10}

(iv) 8^{-10} (v) 6^{-10}

---

21. Simplify the expression $(-7)^{3} \times (-7)^{3}$

(i) $(-7)^{5}$ (ii) $(-7)^{7}$ (iii) $(-10)^{6}$

(iv) $(-7)^{6}$ (v) $(-4)^{6}$

---

22. Simplify the expression $(-6)^{-3} \times (-6)^{-3}$

(i) $(-6)^{-5}$ (ii) $(-6)^{-7}$ (iii) $(-4)^{-6}$

(iv) $(-8)^{-6}$ (v) $(-6)^{-6}$

---

23. Simplify the expression $5^{-3} \times 5^{-4} \times 5^{-2}$

(i) 3^{-9} (ii) 5^{-10} (iii) 5^{-8}

(iv) 7^{-9} (v) 5^{-9}

---

24. Simplify the expression $5^{7} \times 3^{7} \times 2^{7}$

(i) 30^{7} (ii) 28^{7} (iii) 30^{6}

(iv) 30^{8} (v) 32^{7}

---

25. Simplify the expression $3^{-7} \times 2^{-7}$

(i) 6^{-7} (ii) 6^{-8} (iii) 8^{-7}

(iv) 4^{-7} (v) 6^{-6}

---

26. Simplify the expression $(-3)^8 \times (-6)^8$

(i) 16^8 (ii) 18^9 (iii) 20^8

(iv) 18^7 (v) 18^8

Assignment Key

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