

EduSahara™ Learning Center Assignment

Grade : Class VII, ICSE

Chapter : Exponents

Name : Miscellaneous Problems on Exponents

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1. $\left(\frac{-7}{8}\right)^6 =$

(i) $\frac{(-7)^6}{8^6}$ (ii) $\frac{(-7)^6}{6^6}$ (iii) $\frac{(-7)^6}{10^6}$ (iv) $\frac{(-7)^5}{8^6}$ (v) $\frac{(-7)^7}{8^6}$

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

(i) $\frac{(-7)^{-9}}{5^{-9}}$ (ii) $\frac{(-7)^{-10}}{2^{-9}}$ (iii) $\frac{(-7)^{-8}}{2^{-9}}$ (iv) $\frac{(-7)^{-9}}{2^{-12}}$ (v) $\frac{(-7)^{-9}}{2^{-9}}$

3. $7^7 =$

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

4. $(-9)^{-8} =$

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

5. $(-9)^{-8} =$

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

6. $\frac{(-7)^7}{(-7)^4} =$

(i) $(-7)^4$ (ii) $(-4)^3$ (iii) $(-7)^2$ (iv) $(-7)^3$ (v) $(-9)^3$

7. $\frac{\left(\frac{-2}{5}\right)^6}{\left(\frac{-2}{5}\right)^2} =$

(i) $\left(\frac{-2}{5}\right)^3$ (ii) $\left(\frac{-2}{5}\right)^5$ (iii) $\left(\frac{-2}{5}\right)^7$ (iv) $\left(\frac{-2}{5}\right)^4$ (v) $\left(\frac{-4}{5}\right)^4$

8. $[(-9)^5]^{-5} =$

(i) $(-9)^{-24}$ (ii) $(-9)^{-25}$ (iii) $(-7)^{-25}$

(iv) $(-9)^{-26}$ (v) $(-11)^{-25}$

9. $[2^{-5}]^{-2} =$

(i) 2^{10} (ii) 4^{10} (iii) 2^{11}

(iv) 2^9 (v) 2^7

10. $\left[\left(\frac{-8}{3} \right)^2 \right]^{-3} =$

(i) $(-2)^{-6}$ (ii) $\left(\frac{-8}{3} \right)^{-6}$ (iii) $\left(\frac{-8}{3} \right)^{-5}$

(iv) $\left(\frac{-10}{3} \right)^{-6}$ (v) $\left(\frac{-8}{3} \right)^{-7}$

11. Find the exponential notation of $\frac{15}{32}$

(i) $\frac{3 \times 5}{5^5}$ (ii) $\frac{3 \times 5^2}{2^5}$ (iii) $\frac{3 \times 5}{(-1)^5}$

(iv) $\frac{3 \times 4}{2^5}$ (v) $\frac{3 \times 5}{2^5}$

12. Find the exponential notation of $\frac{144}{125}$

(i) $\frac{2^4 \times 3^2}{2^3}$ (ii) $\frac{2^4 \times 3^2}{5^3}$ (iii) $\frac{2^4 \times 3^2}{8^3}$

(iv) $\frac{2^5 \times 3^2}{5^3}$ (v) $\frac{2^3 \times 3^2}{5^3}$

13. Find the exponential notation of $\left(\frac{-320}{27} \right)$

(i) $\frac{-1 \times 2^6 \times 4}{3^3}$ (ii) $\frac{-1 \times 2^6 \times 5}{1}$ (iii) $\frac{-1 \times 2^6 \times 5}{3^3}$

$$(iv) \frac{-1 \times 2^6 \times 5^2}{3^3} \quad (v) \frac{-1 \times 2^6 \times 5}{6^3}$$

14. Find the exponential notation of $(\frac{-8}{75})$

$$(i) \frac{-1 \times 2^3}{3 \times 2^2} \quad (ii) \frac{-1 \times 2^3}{3 \times 5^2} \quad (iii) \frac{-1 \times 2^3}{3 \times 8^2}$$

$$(iv) \frac{(-1)^2 \times 2^3}{3 \times 5^2} \quad (v) \frac{-1 \times 2^2}{3 \times 5^2}$$

15. Find the exponential notation of $\frac{5}{36}$

$$(i) \frac{5}{2^{-1} \times 3^2} \quad (ii) \frac{5^2}{2^2 \times 3^2} \quad (iii) \frac{4}{2^2 \times 3^2}$$

$$(iv) \frac{5}{5^2 \times 3^2} \quad (v) \frac{5}{2^2 \times 3^2}$$

16. Find the exponential notation of $\frac{135}{14}$

$$(i) \frac{3^3 \times 5}{2 \times 7} \quad (ii) \frac{3^3 \times 5}{4 \times 7} \quad (iii) \frac{3^3 \times 5^2}{2 \times 7}$$

$$(iv) \frac{3^3 \times 4}{2 \times 7} \quad (v) \frac{3^3 \times 5}{2^{-1} \times 7}$$

17. Find the exponential notation of $\frac{8}{15}$

$$(i) \frac{2^2}{3 \times 5} \quad (ii) \frac{2^3}{3 \times 5} \quad (iii) \frac{2^3}{3^{-2} \times 5}$$

$$(iv) \frac{2^3}{3 \times 7} \quad (v) \frac{2^4}{3 \times 5}$$

18. Find the exponential notation of $\frac{9}{40}$

$$(i) \frac{3}{2^3 \times 5} \quad (ii) \frac{3^2}{5^3 \times 5} \quad (iii) \frac{3^3}{2^3 \times 5}$$

$$(iv) \frac{3^2}{2^3 \times 5} \quad (v) \frac{3^2}{2^3 \times 2}$$

Assignment Key

- 1) (i)
- 2) (v)
- 3) (ii)
- 4) (ii)
- 5) (v)
- 6) (iv)
- 7) (iv)
- 8) (ii)
- 9) (i)
- 10) (ii)
- 11) (v)
- 12) (ii)
- 13) (iii)
- 14) (ii)
- 15) (v)
- 16) (i)
- 17) (ii)
- 18) (iv)