EduSahara™ Assignment

Name : Miscellaneous Problems on Exponents

Chapter : Exponents

Grade : ICSE Grade VII

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1. $\left(\frac{-8}{3}\right)^{3}$ =

(i) $\frac{(-8)^{3}}{0}$ (ii) $\frac{(-8)^{2}}{3^{3}}$ (iii) $\frac{(-8)^{4}}{3^{3}}$ (iv) $\frac{(-8)^{3}}{6^{3}}$ (v) $\frac{(-8)^{3}}{3^{3}}$

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

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

3. $6^{7}$ =

(i) $\left(\frac{-1}{6}\right)^{-7}$ (ii) $\left(\frac{1}{6}\right)^{-6}$ (iii) $\left(\frac{1}{6}\right)^{-7}$ (iv) $\left(\frac{1}{6}\right)^{-8}$ (v) $\left(\frac{1}{2}\right)^{-7}$

4. $(-3)^{-8}$ =

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

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

(i) $\left(\frac{8}{9}\right)^{-4}$ (ii) $\left(\frac{10}{9}\right)^{-5}$ (iii) $\left(\frac{8}{9}\right)^{-5}$ (iv) $\left(\frac{2}{3}\right)^{-5}$ (v) $\left(\frac{8}{9}\right)^{-6}$

6. $\frac{(-9)^{7}}{(-9)^{6}}$ =

(i) -11 (ii) -9 (iii) -10 (iv) -7 (v) $(-9)^{2}$

$\left(\frac{-9}{5}\right)^{-9}$

7. $\frac{\left(\frac{-9}{5}\right)^{\quad}}{\left(\frac{-9}{5}\right)^{-5}} =$

(i) $\left(\frac{-9}{5}\right)^{-5}$ (ii) $\left(\frac{-11}{5}\right)^{-4}$ (iii) $\left(\frac{-7}{5}\right)^{-4}$ (iv) $\left(\frac{-9}{5}\right)^{-3}$ (v) $\left(\frac{-9}{5}\right)^{-4}$

8. $[3^{-5}]^{-3} =$

(i) $3^{15}$ (ii) $5^{15}$ (iii) $3^{13}$ (iv) $3^{16}$ (v) $3^{14}$

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

(i) $\frac{\left(\frac{-9}{4}\right)}{(-4)}$ (ii) $\frac{\left(\frac{-5}{2}\right)}{(-2)}$ (iii) $(-4)^{-3}$ (iv) $\frac{\left(\frac{-5}{2}\right)}{(-4)}$ (v) $\frac{\left(\frac{-5}{2}\right)}{(-7)}$

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

(i) $\left(\frac{-3}{5}\right)^{-9}$ (ii) $(-1)^{-9}$ (iii) $\left(\frac{-3}{5}\right)^{-8}$ (iv) $\left(\frac{-1}{5}\right)^{-9}$ (v) $\left(\frac{-3}{5}\right)^{-10}$

11. Find the exponential notation of $\left(\frac{-25}{72}\right)$

(i) $\frac{-1\times5^2}{2^3\times1}$ (ii) $\frac{-1\times5^3}{2^3\times3^2}$ (iii) $\frac{-1\times5^2}{2^3\times5^2}$ (iv) $\frac{-1\times5}{2^3\times3^2}$ (v) $\frac{-1\times5^2}{2^3\times3^2}$

12. Find the prime factorization of -8

(i) $-2\times2^3$ (ii) $-1\times2^3$ (iii) $1\times2^3$ (iv) $-1\times2^4$ (v) $-4\times2^3$

13. Find the prime factorization of 10

(i) $1\times5$ (ii) $2\times5$ (iii) $2\times5^2$ (iv) $2\times2$ (v) $2\times8$

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

(i) $\frac{-1\times3\times5^2}{(-1)^3}$ (ii) $\frac{-1\times3\times5^2}{2^3}$ (iii) $\frac{-1\times3\times5^3}{2^3}$ (iv) $\frac{-1\times3\times5^2}{5^3}$ (v) $\frac{-2\times3\times5^2}{2^3}$

15. Find the exponential notation of $\frac{32}{125}$

(i) $\frac{2^5}{8^3}$ (ii) $\frac{2^5}{3^3}$ (iii) $\frac{2^6}{5^3}$ (iv) $\frac{2^4}{5^3}$ (v) $\frac{2^5}{5^3}$

16. Find the exponential notation of $\frac{63}{4}$

(i) $\frac{3^2\times7^2}{2^2}$ (ii) $\frac{3\times7}{2^2}$ (iii) $\frac{3^2\times7}{2^2}$ (iv) $\frac{3^2\times7}{(-1)^2}$ (v) $\frac{3^2\times7}{5^2}$

17. Find the prime factorization of 8

(i) $2^2$ (ii) $2$ (iii) $2^3$ (iv) $5^3$ (v) $2^4$

18. Find the exponential notation of $\frac{98}{45}$

(i) $\frac{2\times7^2}{1\times5}$ (ii) $\frac{2\times7^2}{3^2\times5}$ (iii) $\frac{2\times7^2}{3^2\times8}$ (iv) $\frac{2\times7^3}{3^2\times5}$ (v) $\frac{2\times7}{3^2\times5}$

## Assignment Key

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

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