EduSahara™ Assignment

Name : Expanded and Power Notation

Chapter : Exponents

Grade : SSC Grade VII



1. Find the exponential notation of
$2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$

(i) $2^8$ (ii) $2^9$ (iii) $4^8$ (iv) $(-1)^8$ (v) $2^7$

2. Find the exponential notation of
$-4 \times -4 \times -4 \times -4 \times -4 \times -4 \times -4 \times -4$

(i) $(-4)^8$ (ii) $(-4)^7$ (iii) $(-4)^6$ (iv) $(-1)^7$ (v) $(-6)^7$

3. Find the exponential notation of
$-14 \times -14 \times -14 \times -14 \times -14 \times -14 \times -14 \times -14$

(i) $(-12)^7$ (ii) $(-14)^6$ (iii) $(-14)^8$ (iv) $(-14)^7$ (v) $(-16)^7$

4. Find the exponential notation of
$11 \times 11 \times 11 \times 11 \times 11 \times 11$

(i) $8^5$ (ii) $11^5$ (iii) $11^4$ (iv) $13^5$ (v) $11^6$

5. Find the exponential notation of
$\frac{9}{2} \times \frac{9}{2} \times \frac{9}{2} \times \frac{9}{2} \times \frac{9}{2} \times \frac{9}{2} \times \frac{9}{2}$

(i) $\left(\frac{9}{2}\right)^6$ (ii) $\left(\frac{7}{2}\right)^7$ (iii) $\left(\frac{9}{2}\right)^7$ (iv) $\left(\frac{9}{2}\right)^8$ (v) $\left(\frac{11}{2}\right)^7$

6. Find the exponential notation of
$\frac{15}{13} \times \frac{15}{13} \times \frac{15}{13} \times \frac{15}{13} \times \frac{15}{13} \times \frac{15}{13} \times \frac{15}{13} \times \frac{15}{13}$

(i) $\left(\frac{15}{13}\right)^7$ (ii) $\left(\frac{17}{13}\right)^8$ (iii) $\left(\frac{15}{13}\right)^8$ (iv) $\left(\frac{15}{13}\right)^9$ (v) 1

7. Find the exponential notation of
$\left(\frac{-8}{7}\right) \times \left(\frac{-8}{7}\right) \times \left(\frac{-8}{7}\right) \times \left(\frac{-8}{7}\right) \times \left(\frac{-8}{7}\right) \times \left(\frac{-8}{7}\right)$

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

Find the exponential notation of

8. $(\frac{-19}{10}) \times (\frac{-19}{10}) \times (\frac{-19}{10}) \times (\frac{-19}{10}) \times (\frac{-19}{10}) \times (\frac{-19}{10}) \times (\frac{-19}{10}) \times (\frac{-19}{10})$

(i) $\left(\frac{-17}{10}\right)^{8}$ (ii) $\left(\frac{-21}{10}\right)^{8}$ (iii) $\left(\frac{-19}{10}\right)^{7}$ (iv) $\left(\frac{-19}{10}\right)^{9}$ (v) $\left(\frac{-19}{10}\right)^{8}$

9. Expand the following base power $5^{2}$

(i) 25 (ii) 49 (iii) 5 (iv) 125 (v) 4

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

(i) $\frac{1}{64}$ (ii) $\frac{1}{16}$ (iii) $\frac{1}{256}$ (iv) $\frac{1}{8}$ (v) $\frac{1}{216}$

11. Expand the following base power $(-4)^{3}$

(i) 256 (ii) -64 (iii) -1 (iv) 16 (v) -216

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

(i) $\frac{1}{16}$ (ii) $(\frac{-1}{2})$ (iii) $(\frac{-1}{32})$ (iv) $(\frac{-1}{8})$ (v) $\frac{1}{625}$

13. Expand the following base power $\left(\frac{5}{2}\right)^{4}$

(i) $\frac{3125}{32}$ (ii) $\frac{125}{8}$ (iii) $\frac{2401}{16}$ (iv) $\frac{625}{16}$ (v) $\frac{81}{16}$

14. Expand the following base power $\left(\frac{5}{4}\right)^{-2}$

(i) $\frac{64}{125}$ (ii) $\frac{4}{5}$ (iii) $\frac{16}{49}$ (iv) $\frac{16}{25}$ (v) $\frac{16}{9}$

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

(i) $(\frac{-64}{125})$ (ii) $(\frac{-216}{125})$ (iii) $\frac{16}{25}$ (iv) $\frac{256}{625}$ (v) $(\frac{-8}{125})$

16. Expand the following base power $\left(\frac{-5}{2}\right)^{-5}$

(i) $\frac{16}{625}$ (ii) $\left(\frac{-32}{16807}\right)$ (iii) $\left(\frac{-32}{3125}\right)$ (iv) $\left(\frac{-32}{243}\right)$ (v) $\frac{64}{15625}$

17. Find the exponential notation of $\frac{1}{24}$

(i) $\frac{0}{2^3 \times 3}$ (ii) $\frac{2}{2^3 \times 3}$ (iii) $\frac{1}{2^3 \times 5}$ (iv) $\frac{1}{2^3 \times 3}$ (v) $\frac{1}{2 \times 3}$

18. Find the exponential notation of $\frac{75}{16}$

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

19. Find the exponential notation of $\frac{27}{160}$

(i) $\frac{3^4}{2^5 \times 5}$ (ii) $\frac{3^3}{(-1)^5 \times 5}$ (iii) $\frac{3^2}{2^5 \times 5}$ (iv) $\frac{3^3}{2^5 \times 5}$ (v) $\frac{3^3}{2^5 \times 8}$

20. Find the prime factorization of -216

(i) $-1 \times 2^4 \times 3^3$ (ii) $-1 \times 2^3 \times 6^3$ (iii) $-1 \times 2^3 \times 3^3$ (iv) $-1 \times 2^3 \times 3$ (v) $-2 \times 2^3 \times 3^3$

21. Find the exponential notation of $\left(\frac{-3}{8}\right)$

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

22. Find the exponential notation of $\frac{5}{6}$

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

23. Find the prime factorization of 25

(i) $5^2$ (ii) $7^2$ (iii) $5$ (iv) $2^2$ (v) $5^3$

24. Find the exponential notation of $\frac{9}{10}$

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

## Assignment Key

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