EduSahara™ Assignment

Name : Exponents Concepts

Chapter : Exponents and Powers

Grade : CBSE Grade VII

1. The base in the term 7^9 is

   (i) 9 (ii) -9 (iii) 7 (iv) 4 (v) -7

2. The exponent in the term 9^5 is

   (i) 9 (ii) 3 (iii) 5 (iv) -9 (v) -5

3. The power in the term 8^3 is

   (i) -3 (ii) -8 (iii) 3 (iv) 8 (v) 0

4. The base in the term $\left(\frac{3}{2}\right)^4$ is

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

5. The exponent in the term $\left(\frac{7}{4}\right)_5$ is

   (i) 5 (ii) $(\frac{-7}{4})$ (iii) $\frac{7}{4}$ (iv) -5 (v) $\frac{5}{4}$

6. Find the exponential notation of
   $3 \times 3 \times 3$

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

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

   (i) $(-7)^5$ (ii) $(-4)^6$ (iii) $(-4)^4$ (iv) $(-4)^5$ (v) $(-2)^5$

8. Find the exponential notation of
   $-12 \times -12 \times -12 \times -12$

   (i) $(-12)^3$ (ii) $(-12)^4$ (iii) $(-12)^5$ (iv) $(-14)^4$ (v) $(-9)^4$

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

   (i) 11^2 (ii) 9^3 (iii) 14^3 (iv) 11^4 (v) 11^3

Find the exponential notation of

10. $\frac{7}{2} \times \frac{7}{2} \times \frac{7}{2} \times \frac{7}{2} \times \frac{7}{2} \times \frac{7}{2} \times \frac{7}{2} \times \frac{7}{2}$

(i) $\left(\frac{5}{2}\right)^{8}$ (ii) $\left(\frac{7}{2}\right)^{7}$ (iii) $\left(\frac{7}{2}\right)^{9}$ (iv) $\left(\frac{7}{2}\right)^{8}$ (v) $\left(\frac{9}{2}\right)^{8}$

Find the exponential notation of

11. $\frac{18}{17} \times \frac{18}{17} \times \frac{18}{17} \times \frac{18}{17}$

(i) $\left(\frac{18}{17}\right)^{5}$ (ii) $\left(\frac{18}{17}\right)^{3}$ (iii) $\left(\frac{16}{17}\right)^{4}$ (iv) $\left(\frac{18}{17}\right)^{4}$ (v) $\left(\frac{20}{17}\right)^{4}$

Find the exponential notation of

12. $(\frac{-4}{3}) \times (\frac{-4}{3}) \times (\frac{-4}{3}) \times (\frac{-4}{3}) \times (\frac{-4}{3}) \times (\frac{-4}{3}) \times (\frac{-4}{3}) \times (\frac{-4}{3})$

(i) $\left(\frac{-4}{3}\right)^{9}$ (ii) $\left(\frac{-4}{3}\right)^{8}$ (iii) $(-2)^{8}$ (iv) $\left(\frac{-2}{3}\right)^{8}$ (v) $\left(\frac{-4}{3}\right)^{7}$

Find the exponential notation of

13. $(\frac{-12}{19}) \times (\frac{-12}{19}) \times (\frac{-12}{19}) \times (\frac{-12}{19}) \times (\frac{-12}{19}) \times (\frac{-12}{19}) \times (\frac{-12}{19})$

(i) $\left(\frac{-12}{19}\right)^{8}$ (ii) $\left(\frac{-12}{19}\right)^{6}$ (iii) $\left(\frac{-10}{19}\right)^{7}$ (iv) $\left(\frac{-14}{19}\right)^{7}$ (v) $\left(\frac{-12}{19}\right)^{7}$

14. Which of the following statements are true?

a) $\left(x^{m}\right)^{n} = \left(x^{n}\right)^{m}$

b) $\left(x^{m}\right)^{n} = x^{(m+n)}$

c) $\frac{x^{m}}{x^{n}} = x^{\frac{m}{n}}$

d) $a^{m} . a^{n} = a^{mn}$

e) $a^{0} = 1 \ (a \neq 0)$

f) $a . x^{m} = a^{m} . x^{m}$

(i) {a,e} (ii) {b,e,a} (iii) {d,f,a} (iv) {c,e} (v) {b,a}

15. $-1^{2} =$

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

16. $-1^5 =$

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

17. $10^0 =$

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

18. $0^0 =$

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

19. $-3^0 =$

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

20. $0^5 =$

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

21. $p^2 =$

(i) $p \times p \times p$ (ii) p (iii) $-2 \times p \times p$ (iv) $3 \times p \times p$ (v) $p \times p$

22. $23k^3l^4 =$

(i) $21 \times k \times k \times k \times l \times l \times l \times l$ (ii) $23 \times k \times k \times k \times l \times l \times l \times l$ (iii) $25 \times k \times k \times k \times l \times l \times l \times l$

(iv) $23 \times k \times k \times k \times k \times l \times l \times l \times l$ (v) $23 \times k \times k \times l \times l \times l \times l$

23. $k^3l^2m^4 =$

(i) $4 \times k \times k \times k \times l \times l \times m \times m \times m \times m$ (ii) $k \times k \times k \times k \times l \times l \times m \times m \times m \times m$ (iii) $k \times k \times k \times l \times l \times m \times m \times m \times m$

(iv) $k \times k \times l \times l \times m \times m \times m \times m$ (v) $-2 \times k \times k \times k \times l \times l \times m \times m \times m \times m$

24. $26 \times n \times n =$

(i) $26n$ (ii) $29n^2$ (iii) $26n^2$ (iv) $24n^2$ (v) $26n^3$

25. $i \times i \times i \times i \times j \times j \times j =$

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

26. $h \times h \times h \times i \times i \times i \times i \times j \times j \times j =$

(i) $4h^3i^4j^3$ (ii) $-h^3i^4j^3$ (iii) $h^2i^4j^3$ (iv) $h^3i^4j^3$ (v) $h^4i^4j^3$

27. The expanded form of $(2e)^3$ is

(i) $2e \times 2e \times 2e \times 2e \times 2e$ (ii) $2e \times 2e \times 2e \times 2e$ (iii) $2e \times 2e$ (iv) $2e \times 2e \times 2e$ (v) $2e$

28. The expanded form of $(\frac{2}{5}m)^3$ is

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

29. The expanded form of $(3st)^3$ is

(i) $3st$ (ii) $3st \times 3st \times 3st$ (iii) $3st \times 3st \times 3st \times 3st \times 3st$ (iv) $3st \times 3st \times 3st \times 3st$ (v) $3st \times 3st$

30. The expanded form of $(\frac{3}{5}ab)^3$ is

(i) $\frac{3}{5}ab \times \frac{3}{5}ab$ (ii) $\frac{3}{5}ab \times \frac{3}{5}ab \times \frac{3}{5}ab \times \frac{3}{5}ab$ (iii) $\frac{3}{5}ab$ (iv) $\frac{3}{5}ab \times \frac{3}{5}ab \times \frac{3}{5}ab \times \frac{3}{5}ab \times \frac{3}{5}ab$

(v) $\frac{3}{5}ab \times \frac{3}{5}ab \times \frac{3}{5}ab$

31. The expanded form of $(-3h-4)^3$ is

(i) $(-3h-4) \times (-3h-4)$ (ii) $(-3h-4) \times (-3h-4) \times (-3h-4)$

(iii) $(-3h-4) \times (-3h-4) \times (-3h-4) \times (-3h-4) \times (-3h-4)$ (iv) $(-3h-4)$

(v) $(-3h-4) \times (-3h-4) \times (-3h-4) \times (-3h-4)$

Assignment Key

1) (iii)	2) (iii)	3) (iii)	4) (v)	5) (iii)	6) (iii)
7) (iv)	8) (ii)	9) (v)	10) (iv)	11) (iv)	12) (ii)
13) (v)	14) (i)	15) (iii)	16) (iv)	17) (i)	18) (iv)
19) (ii)	20) (iii)	21) (v)	22) (ii)	23) (iii)	24) (iii)
25) (ii)	26) (iv)	27) (iv)	28) (iii)	29) (ii)	30) (v)
31) (ii)					