EduSahara™ Assignment

Name : Exponents Concepts

Chapter : Exponents and Powers

Grade : CBSE Grade VII

1. The base in the term 9^6 is

   (i) -6 (ii) 6 (iii) 9 (iv) 7 (v) -9

2. The exponent in the term 6^2 is

   (i) 2 (ii) -1 (iii) -6 (iv) 6 (v) -2

3. The power in the term 6^7 is

   (i) 6 (ii) -7 (iii) 5 (iv) -6 (v) 7

4. The base in the term 4^7 is

   (i) $\frac{4}{1}$ (ii) 7 (iii) -4 (iv) 2 (v) -7

5. The exponent in the term $(\frac{8}{3})^{7}$ is

   (i) 7 (ii) $(\frac{-8}{3})$ (iii) $\frac{8}{3}$ (iv) 2 (v) -7

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

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

7. Find the exponential notation of
   $-6 \times -6 \times -6 \times -6 \times -6 \times -6 \times -6 \times -6$

   (i) $(-6)^7$ (ii) $(-6)^9$ (iii) $(-8)^8$ (iv) $(-6)^8$ (v) $(-4)^8$

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

   (i) $(-14)^6$ (ii) $(-16)^6$ (iii) $(-14)^7$ (iv) $(-14)^5$ (v) $(-11)^6$

9. Find the exponential notation of
   $10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10 \times 10$

   (i) 10^8 (ii) 7^8 (iii) 10^7 (iv) 12^8 (v) 10^9

10. Find the exponential notation of
    $\frac{6}{1} \times \frac{6}{1} \times \frac{6}{1}$

    (i) 6^4 (ii) 3^3 (iii) 8^3 (iv) 6^2 (v) 6^3

Find the exponential notation of

11. $\frac{17}{16} \times \frac{17}{16} \times \frac{17}{16} \times \frac{17}{16}$

(i) $\left(\frac{17}{16}\right)^{4}$ (ii) $\left(\frac{17}{16}\right)^{3}$ (iii) $\left(\frac{15}{16}\right)^{4}$ (iv) $\left(\frac{17}{16}\right)^{5}$ (v) $\left(\frac{19}{16}\right)^{4}$

Find the exponential notation of

12. $(\frac{-2}{9}) \times (\frac{-2}{9}) \times (\frac{-2}{9}) \times (\frac{-2}{9}) \times (\frac{-2}{9}) \times (\frac{-2}{9}) \times (\frac{-2}{9})$

(i) $\left(\frac{-2}{9}\right)^{8}$ (ii) $\left(\frac{-4}{9}\right)^{8}$ (iii) $\left(\frac{-2}{9}\right)^{9}$ (iv) $\left(\frac{-2}{9}\right)^{7}$ (v) $\left(\frac{-2}{9}\right)^{11}$

Find the exponential notation of

13. $(\frac{-13}{14}) \times (\frac{-13}{14}) \times (\frac{-13}{14}) \times (\frac{-13}{14}) \times (\frac{-13}{14})$

(i) $\left(\frac{-13}{14}\right)^{6}$ (ii) $\left(\frac{-13}{14}\right)^{4}$ (iii) $\left(\frac{-11}{14}\right)^{5}$ (iv) $\left(\frac{-15}{14}\right)^{5}$ (v) $\left(\frac{-13}{14}\right)^{5}$

14. Which of the following statements are true?

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

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

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

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

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

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

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

15. $-1^{2} =$

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

16. $-1^{7} =$

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

17. $1^{0} =$

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

18. $0^{0} =$

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

19. $-8^0 =$

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

20. $0^3 =$

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

21. $e^2 =$

(i) $e \times e \times e$ (ii) $e \times e$ (iii) $-2 \times e \times e$ (iv) e (v) $4 \times e \times e$

22. $c^4 d^4 =$

(i) $-2 \times c \times c \times c \times c \times d \times d \times d \times d$ (ii) $c \times c \times c \times d \times d \times d \times d$ (iii) $c \times c \times c \times c \times c \times d \times d \times d \times d$

(iv) $3 \times c \times c \times c \times c \times d \times d \times d \times d$ (v) $c \times c \times c \times c \times d \times d \times d \times d$

23. $30 n^2 o^2 p^3 =$

(i) $27 \times n \times n \times o \times o \times p \times p \times p$ (ii) $30 \times n \times n \times n \times o \times o \times p \times p \times p$ (iii) $32 \times n \times n \times o \times o \times p \times p \times p$

(iv) $30 \times n \times o \times o \times p \times p \times p$ (v) $30 \times n \times n \times o \times o \times p \times p \times p$

24. $30 \times h \times h =$

(i) $33 h^2$ (ii) $27 h^2$ (iii) $30 h^2$ (iv) $30 h^3$ (v) $30 h$

25. $f \times f \times g \times g \times g =$

(i) $-2 f^2 g^3$ (ii) $f g^3$ (iii) $3 f^2 g^3$ (iv) $f^3 g^3$ (v) $f^2 g^3$

26. $7 \times g \times g \times g \times g \times h \times h \times h \times i \times i \times i \times i =$

(i) $7 g^4 h^3 i^4$ (ii) $7 g^3 h^3 i^4$ (iii) $4 g^4 h^3 i^4$ (iv) $9 g^4 h^3 i^4$ (v) $7 g^5 h^3 i^4$

27. The expanded form of $(-3o)^3$ is

(i) $(-3o) \times (-3o) \times (-3o) \times (-3o) \times (-3o)$ (ii) $(-3o) \times (-3o) \times (-3o)$ (iii) $(-3o) \times (-3o)$ (iv) $(-3o)$

(v) $(-3o) \times (-3o) \times (-3o) \times (-3o)$

28. The expanded form of $(\frac{1}{2}b)^3$ is

(i) $\frac{1}{2}b \times \frac{1}{2}b \times \frac{1}{2}b \times \frac{1}{2}b \times \frac{1}{2}b$ (ii) $\frac{1}{2}b \times \frac{1}{2}b$ (iii) $\frac{1}{2}b$ (iv) $\frac{1}{2}b \times \frac{1}{2}b \times \frac{1}{2}b$ (v) $\frac{1}{2}b \times \frac{1}{2}b \times \frac{1}{2}b \times \frac{1}{2}b$

29. The expanded form of $(-5no)^3$ is

(i) $(-5no) \times (-5no) \times (-5no) \times (-5no)$ (ii) $(-5no) \times (-5no) \times (-5no) \times (-5no) \times (-5no)$

(iii) $(-5no) \times (-5no) \times (-5no)$ (iv) $(-5no) \times (-5no)$ (v) $(-5no)$

30. The expanded form of $(\frac{1}{3}hi)^3$ is

(i) $\frac{1}{3}hi \times \frac{1}{3}hi \times \frac{1}{3}hi$ (ii) $\frac{1}{3}hi \times \frac{1}{3}hi \times \frac{1}{3}hi \times \frac{1}{3}hi \times \frac{1}{3}hi$ (iii) $\frac{1}{3}hi \times \frac{1}{3}hi$ (iv) $\frac{1}{3}hi \times \frac{1}{3}hi \times \frac{1}{3}hi \times \frac{1}{3}hi$ (v) $\frac{1}{3}hi$

31. The expanded form of $(5uv-u)^3$ is

(i) $(5uv-u)$ (ii) $(5uv-u)\times(5uv-u)\times(5uv-u)\times(5uv-u)$ (iii) $(5uv-u)\times(5uv-u)\times(5uv-u)$

(iv) $(5uv-u)\times(5uv-u)\times(5uv-u)\times(5uv-u)\times(5uv-u)$ (v) $(5uv-u)\times(5uv-u)$

Assignment Key

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