EduSahara™ Assignment

Name : Base Powers Miscellaneous

Chapter : Exponents and Powers

Grade : CBSE Grade VIII

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1. Which of the following statements are true?

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

   b) $a . x^m = a^m . x^m$

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

   d) $(x^m)^n = (x^n)^m$

   e) $(x^m)^n = x^{(m+n)}$

   f) $a^0 = 1 \ (a \neq 0)$

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

2. Simplify $\left(\frac{9^m . 100^{(m-5)} . 121^{(m-5)}}{81^{(m-5)} . 10^{(m-5)} . 11^{(m-3)}}\right)$

   (i) $9^5 . 10^0 . 11^{(-2)}$ (ii) $9^{(m+5)} . 10^{(-m+5)} . 11^{(-m+1)}$ (iii) $9^{(-m+10)} . 10^{(m-5)} . 11^{(m-7)}$

   (iv) $9^{(-m+10)} . 10^{(-m+5)} . 11^{(-m+1)}$

3. $-1^8 =$

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

4. $-1^9 =$

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

5. $8^0 =$

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

6. $0^0 =$

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

7. $-10^0 =$

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

8. $0^2 =$

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

9. Find the reciprocal of 5^6

(i) $\left(\frac{1}{5}\right)^5$ (ii) $\left(\frac{1}{5}\right)^6$ (iii) $\left(\frac{3}{5}\right)^6$ (iv) $\left(\frac{1}{5}\right)^7$ (v) $\left(\frac{-1}{5}\right)^6$

10. Find the reciprocal of $\left(\frac{-3}{2}\right)^5$

(i) $\left(\frac{-2}{3}\right)^7$ (ii) $\left(\frac{-4}{3}\right)^5$ (iii) $\left(\frac{-2}{3}\right)^5$ (iv) $\left(\frac{-2}{3}\right)^6$ (v) $\left(\frac{-2}{3}\right)^4$

11. $\left(2^4 \times 9^8\right)^6 =$

(i) $2^4 \times 9^{48}$ (ii) $2^4 \times 9^8$ (iii) $2^{48} \times 9^{24}$ (iv) $2^{24} \times 9^{48}$ (v) $2^{24} \times 9^8$

12. $\frac{\left(3^6\right)^{-6} \times \left(4^{(-6)}\right)^4 \times \left(7^5\right)^{-5}}{\left(3^3\right)^{-4} \times \left(4^5\right)^6 \times \left(7^6\right)^{-6}} =$

(i) $3^{(-24)} \times 4^{(-54)} \times 7^{11}$ (ii) $3^{(-23)} \times 4^{(-54)} \times 7^{11}$ (iii) $3^{(-24)} \times 4^{(-53)} \times 7^{11}$ (iv) $3^{(-24)} \times 4^{(-54)} \times 7^{12}$

13. $\left[\left(7^4\right)^3 \times \left(7^5\right)^3\right] \div 7^{27}$

(i) 7 (ii) 1 (iii) 4 (iv) 2 (v) 0

14. $\left[\left(\frac{6}{3}\right)^{-2} \times \left(\frac{4}{8}\right)^{-2}\right] \div \left[\left(\frac{3}{6}\right)^2 \times \left(\frac{8}{4}\right)^2\right] =$

(i) (-1) (ii) $\frac{6}{3}$ (iii) 0 (iv) $\frac{4}{8}$ (v) 1

Assignment Key

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

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