EduSahara™ Assignment

Name : Simplification of Base Power Expressions

Chapter : Exponents and Powers

Grade : CBSE Grade VII

1. Simplify $\frac{(-2)^{-2}\times(-4)^{-2}}{2^{2}\times(-2)^{-2}}$

(i) 2^{-7} (ii) $(-1)^{-6}$ (iii) 2^{-6} (iv) 2^{-5} (v) 5^{-6}

2. Simplify $\frac{4^{-2}\times(-3)^{-2}\times4^{2}}{(-3)^{2}\times2^{2}\times4^{2}}$

(i) 72^{-1} (ii) 74^{-2} (iii) 72^{-3} (iv) 72^{-2} (v) 69^{-2}

3. Simplify $\frac{5^{-2}\times4^{2}\times(-2)^{-2}\times(-2)^{2}}{(-3)^{2}\times5^{2}\times(-3)^{-2}\times3^{-2}}$

(i) $\left(\frac{2}{5}\right)^{2}$ (ii) $\left(\frac{14}{25}\right)^{2}$ (iii) $\left(\frac{12}{25}\right)^{3}$ (iv) $\frac{12}{25}$ (v) $\left(\frac{12}{25}\right)^{2}$

4. Simplify $\frac{(-3)^{-3}\times5^{-2}}{5^{-2}\times(-2)^{2}}$

(i) $\frac{-1\times1}{4^{2}\times3^{3}}$ (ii) $\frac{-1\times1}{2^{2}\times3}$ (iii) $\frac{-1\times1}{2^{2}\times3^{3}}$ (iv) $\frac{-2\times1}{2^{2}\times3^{3}}$ (v) $\frac{-1\times2}{2^{2}\times3^{3}}$

5. Simplify $\frac{(-3)^{-3}\times(-5)^{2}\times(-4)^{-3}}{(-4)^{-2}\times(-2)^{3}\times(-3)^{3}}$

(i) $\frac{5}{2^{5}\times3^{6}}$ (ii) $\frac{5^{2}}{2^{5}\times1}$ (iii) $\frac{5^{2}}{2^{5}\times3^{6}}$ (iv) $\frac{5^{2}}{4^{5}\times3^{6}}$ (v) $\frac{5^{3}}{2^{5}\times3^{6}}$

6. Simplify $\frac{(-3)^{3}\times(-3)^{2}\times(-3)^{2}}{5^{3}\times3^{3}\times(-3)^{2}\times(-5)^{3}}$

(i) $\frac{3^{7}}{3^{5}\times5^{6}}$ (ii) $\frac{3^{7}}{3^{5}\times3^{6}}$ (iii) $\frac{3^{7}}{5^{5}\times5^{6}}$ (iv) $\frac{3^{8}}{3^{5}\times5^{6}}$ (v) $\frac{3^{6}}{3^{5}\times5^{6}}$

7. Simplify $\frac{2^{-3}\times 2^{-2}\times 4^{-2}\times (-5)^{-2}}{4^{-3}\times (-2)^{-3}\times (-2)^{-3}}$

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

8. $\frac{g^{14}h^{19}}{g^3h^4} =$

(i) $g^{17}h^{15}$ (ii) $g^{17}h^{23}$ (iii) $g^{33}h^7$ (iv) $g^{11}h^{23}$ (v) $g^{11}h^{15}$

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

(i) d^{17} (ii) d^8 (iii) $5d^5$ (iv) d^5 (v) d^9

10. $\left(f^{14f}\right)^2 =$

(i) $f^{(14f+2)}$ (ii) f^{28f} (iii) $2f^{28f}$ (iv) f^{14f}

11. $(q-r)^{(-2)}.(q-r)^{(-8)} =$

(i) $(q-r)^{(-8)}$ (ii) $(q-r)^6$ (iii) $(q-r)^{(-10)}$ (iv) $(q-r)^{16}$ (v) $(q-r)^{(-2)}$

12. $\left(9^4\times 8^6\right)^3 =$

(i) $9^4\times 8^{18}$ (ii) $9^{12}\times 8^6$ (iii) $9^4\times 8^6$ (iv) $9^{18}\times 8^{12}$ (v) $9^{12}\times 8^{18}$

13. $\frac{\left(9^{(-4)}\right)^6\times\left(12^5\right)^{-6}\times\left(13^{(-4)}\right)^{-2}}{\left(9^{(-2)}\right)^{-5}\times\left(12^{(-5)}\right)^{-4}\times\left(13^3\right)^{-2}} =$

(i) $9^{(-33)}\times 12^{(-50)}\times 13^{14}$ (ii) $9^{(-34)}\times 12^{(-50)}\times 13^{14}$ (iii) $9^{(-34)}\times 12^{(-50)}\times 13^{15}$

(iv) $9^{(-34)}\times 12^{(-49)}\times 13^{14}$

14. $\left[\left(5^4\right)^4\times\left(5^6\right)^4\right]\div 5^{40}$

(i) 5 (ii) 3 (iii) 1 (iv) 2 (v) 0

15. $\left[\left(\frac{2}{9}\right)^{-9}\times\left(\frac{7}{6}\right)^{-9}\right]\div\left[\left(\frac{9}{2}\right)^9\times\left(\frac{6}{7}\right)^9\right] =$

(i) $\frac{2}{9}$ (ii) 1 (iii) 0 (iv) (-1) (v) $\frac{7}{6}$

Assignment Key

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