EduSahara™ Assignment

Name : Simplification of Base Power Expressions

Chapter : Exponents and Powers

Grade : CBSE Grade VII

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

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

2. Simplify $\frac{(-2)^{-2}\times4^{-2}\times(-5)^{2}}{(-3)^{-2}\times(-4)^{-2}\times2^{2}}$

(i) $\left(\frac{15}{4}\right)^{2}$ (ii) $\left(\frac{15}{4}\right)^{3}$ (iii) $\left(\frac{17}{4}\right)^{2}$ (iv) $\left(\frac{13}{4}\right)^{2}$ (v) $\frac{15}{4}$

3. Simplify $\frac{3^{-2}\times2^{2}\times5^{2}\times5^{2}}{5^{2}\times5^{2}\times3^{2}\times(-2)^{2}}$

(i) 3^{-5} (ii) 5^{-4} (iii) 3^{-4} (iv) 1 (v) 3^{-3}

4. Simplify $\frac{(-5)^{2}\times(-4)^{-3}}{4^{3}\times3^{-3}}$

(i) $\frac{-1\times3^{3}\times5^{2}}{2^{12}}$ (ii) $\frac{-1\times3^{2}\times5^{2}}{2^{12}}$ (iii) $\frac{-1\times3^{3}\times5^{2}}{(-1)^{12}}$ (iv) $\frac{-1\times3^{3}\times5^{2}}{4^{12}}$ (v) $\frac{-1\times3^{3}\times5^{3}}{2^{12}}$

5. Simplify $\frac{5^{3}\times3^{-2}\times2^{2}}{3^{3}\times(-4)^{-2}\times2^{2}}$

(i) $\frac{2^{4}\times5^{3}}{3^{3}}$ (ii) $\frac{2^{4}\times5^{3}}{5^{5}}$ (iii) $\frac{2^{3}\times5^{3}}{3^{5}}$ (iv) $\frac{2^{4}\times5^{3}}{3^{5}}$ (v) $\frac{2^{5}\times5^{3}}{3^{5}}$

6. Simplify $\frac{(-5)^{3}\times(-2)^{3}\times2^{3}}{(-2)^{3}\times4^{2}\times4^{3}\times(-4)^{3}}$

(i) $\frac{2^{6}\times5^{3}}{5^{19}}$ (ii) $\frac{2^{6}\times5^{4}}{2^{19}}$ (iii) $\frac{2^{6}\times5^{3}}{(-1)^{19}}$ (iv) $\frac{2^{5}\times5^{3}}{2^{19}}$ (v) $\frac{2^{6}\times5^{3}}{2^{19}}$

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

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

8. $\frac{n^{18}o^{19}}{n^9o^4} =$

(i) $n^{27}o^{23}$ (ii) n^9o^{15} (iii) n^9o^{23} (iv) $n^{37}o^{13}$ (v) $n^{27}o^{15}$

9. $\left(\frac{r^7}{r^8}\right)^2 =$

(i) r^7 (ii) r^8 (iii) r^{15} (iv) $r^{(-2)}$ (v) $2r^{(-2)}$

10. $\left(s^{19s}\right)^6 =$

(i) $s^{(19s+6)}$ (ii) $6s^{114s}$ (iii) s^{19s} (iv) s^{114s}

11. $(g+h)^9.(g+h)^{(-5)} =$

(i) $(g+h)^{(-45)}$ (ii) $(g+h)^4$ (iii) $(g+h)^{14}$ (iv) $(g+h)^9$ (v) $(g+h)^{(-5)}$

12. $\left(8^8\times 6^9\right)^5 =$

(i) $8^8\times 6^{45}$ (ii) $8^8\times 6^9$ (iii) $8^{45}\times 6^{40}$ (iv) $8^{40}\times 6^{45}$ (v) $8^{40}\times 6^9$

13. $\frac{\left(5^5\right)^{-3}\times\left(7^{(-3)}\right)^{-6}\times\left(10^{(-2)}\right)^6}{\left(5^{(-6)}\right)^3\times\left(7^6\right)^{-5}\times\left(10^{(-5)}\right)^{-5}} =$

(i) $5^3\times 7^{48}\times 10^{(-37)}$ (ii) $5^3\times 7^{49}\times 10^{(-37)}$ (iii) $5^3\times 7^{48}\times 10^{(-36)}$ (iv) $5^4\times 7^{48}\times 10^{(-37)}$

14. $\left[\left(8^6\right)^3\times\left(8^4\right)^3\right]\div 8^{30}$

(i) 8 (ii) 0 (iii) 2 (iv) 4 (v) 1

15. $\left[\left(\frac{8}{5}\right)^{-6}\times\left(\frac{2}{4}\right)^{-6}\right]\div\left[\left(\frac{5}{8}\right)^6\times\left(\frac{4}{2}\right)^6\right] =$

(i) 0 (ii) 1 (iii) (-1) (iv) $\frac{2}{4}$ (v) $\frac{8}{5}$

Assignment Key

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