EduSahara™ Assignment

Name : Simplification of Base Power Expressions

Chapter : Exponents and Powers

Grade : CBSE Grade VII

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

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

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

(i) $\left(\frac{5}{3}\right)^{3}$ (ii) 1 (iii) $\left(\frac{7}{3}\right)^{4}$ (iv) $\left(\frac{5}{3}\right)^{4}$ (v) $\left(\frac{5}{3}\right)^{5}$

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

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

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

(i) 2^{7} (ii) 4^{6} (iii) 2^{6} (iv) 2^{5} (v) $(-1)^{6}$

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

(i) $\frac{-1\times 3^{2}\times 5^{2}}{2^{7}}$ (ii) $\frac{(-1)^{2}\times 3^{2}\times 5^{2}}{2^{7}}$ (iii) $\frac{-1\times 3^{2}\times 5^{2}}{5^{7}}$ (iv) $\frac{-1\times 3^{2}\times 5}{2^{7}}$ (v) $\frac{-1\times 3^{2}\times 5^{2}}{2^{5}}$

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

(i) $\frac{-1\times 2^{8}\times 5}{1}$ (ii) $\frac{-1\times 2^{8}\times 4}{3^{5}}$ (iii) $\frac{(-1)^{2}\times 2^{8}\times 5}{3^{5}}$ (iv) $\frac{-1\times 2^{8}\times 5}{3^{5}}$ (v) $\frac{-1\times 2^{8}\times 5}{5^{5}}$

7. Simplify $\frac{5^{-2}\times3^{-3}\times(-4)^{-2}\times2^{-3}}{(-3)^{-2}\times4^{-2}\times(-2)^{-3}}$

(i) $\frac{-1\times1}{3\times7^2}$ (ii) $\frac{(-1)^2\times1}{3\times5^2}$ (iii) $\frac{-2\times1}{3\times5^2}$ (iv) $\frac{-1\times1}{3\times2^2}$ (v) $\frac{-1\times1}{3\times5^2}$

8. $\frac{d^{20}e^{11}}{d^9e^9}=$

(i) $d^{31}e^{18}$ (ii) $d^{29}e^{20}$ (iii) $d^{11}e^2$ (iv) $d^{29}e^2$ (v) $d^{11}e^{20}$

9. $\left(\frac{h^{15}}{h^8}\right)^3=$

(i) h^8 (ii) h^{15} (iii) $3h^{21}$ (iv) h^{23} (v) h^{21}

10. $\left(a^{22a}\right)^5=$

(i) $a^{(22a+5)}$ (ii) $5a^{110a}$ (iii) a^{110a} (iv) a^{22a}

11. $(k-l)^{(-7)}.(k-l)^5=$

(i) $(k-l)^{(-12)}$ (ii) $(k-l)^5$ (iii) $(k-l)^{(-2)}$ (iv) $(k-l)^{(-35)}$ (v) $(k-l)^{(-7)}$

12. $\left(6^5\times4^2\right)^6=$

(i) $6^{12}\times4^{30}$ (ii) $6^5\times4^2$ (iii) $6^5\times4^{12}$ (iv) $6^{30}\times4^{12}$ (v) $6^{30}\times4^2$

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

(i) $2^{36}\times3^{24}\times5^{(-42)}$ (ii) $2^{36}\times3^{24}\times5^{(-41)}$ (iii) $2^{37}\times3^{24}\times5^{(-42)}$ (iv) $2^{36}\times3^{25}\times5^{(-42)}$

14. $\left[\left(7^4\right)^2\times\left(7^6\right)^6\right]\div7^{44}$

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

15. $\left[\left(\frac{2}{5}\right)^{-3}\times\left(\frac{4}{3}\right)^{-3}\right]\div\left[\left(\frac{5}{2}\right)^3\times\left(\frac{3}{4}\right)^3\right]=$

(i) 0 (ii) $\frac{2}{5}$ (iii) (-1) (iv) 1 (v) $\frac{4}{3}$

Assignment Key

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