

Subject: Maths

Class: 8

Topic: Exponents and Powers

Watch video #6 and solve the following exercise:

### EXERCISE 2.3

Use Cordova Smart Class Software on the smart board in class to do Exercise.

1. Simplify and write the answer in the form of  $\frac{p}{q}$  :

(i)  $\left[\left(\frac{1}{2}\right)^3\right]^2$

(ii)  $(3^{-2})^3$

2. Find the value of  $(6^{-1} - 7^{-1})^{-1}$ .

3. Simplify :

(i)  $6^0 - 7^0 - 5^0$

(ii)  $(5^3)^2 \times 5^{-5}$

(iii)  $(9^3)^2 \div (3^6)^2$

4. Simplify and write the answer with positive integral index :

(i)  $(-4 \times 7)^{-3}$

(ii)  $27^3 \times 3^{-6}$

(iii)  $\left(\frac{x^4 y^3 z^2}{xy^2 z^4}\right)^{-2}$

5. By what number should  $\left[\left(-\frac{5}{3}\right)^3\right]^{-3}$  be multiplied to obtain  $\left(-\frac{3}{5}\right)^4$ ?

6. Simplify :

(i)  $(4^{-1} + 8^{-1}) \times \left(\frac{3}{2}\right)^{-1}$

(ii)  $\left[\left(\frac{2}{3}\right)^2\right]^{-2}$

7. Find  $x$ , if  $(3^{x+2} - 9) \div 8 = 9$ .

8. Show that  $\frac{25 \times 2x^{-4}}{5^{-2} \times 10x^{-6}} = 125x^2$ .

9. Simplify :

(i)  $\left[\left(\frac{6}{7}\right)^{-1} - \left(\frac{1}{6}\right)^{-1}\right]^{-1} \div (29)^{-1}$

(ii)  $\left[\left(\frac{1}{3}\right)^{-2} - \left(\frac{1}{2}\right)^{-3} + \left(\frac{1}{4}\right)^{-1}\right]^{-1} \div 5^{-2}$ .

10. Find the value of  $m$ , if  $(-5)^{m+1} \times (-5)^6 = (-1)^9 (5)^9$ .



Laughter Time



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