



Class 7

Important Formulas

Chapter 11 – Exponents and Powers

1. If a is a non-zero rational number and n is a natural number, then the product $a \times a \times a \times \dots \times a$ (n times) is denoted by a^n and is read as 'a raised to the power n '. Rational number ' a ' is called the base and natural number n is known as the exponent. Also, a^n is known as the exponential form (n times).

2. For any non-zero rational number, we have $a^0 = 1$ and $a^1 = a$.

3. If a and b are non-zero rational numbers and m and n are natural numbers, then following are the laws of exponents:

(i) $a^m \times a^n = a^{m+n}$

(ii) $\frac{a^m}{a^n} = a^{m-n}, (m > n)$

(iii) $(a^m)^n = a^{mn} = (a^n)^m$

(iv) $(a \times b)^n = a^n b^n$

(v) $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$