PHASE - II

13/05/2020

Co-ordinator

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Std - VIII Sub - Maths.

CHPT - 2 (Exponents and Powers)

5^4 → Exponent / Power / index

5 → Base.

eg $5^4 = 5\times5\times5\times5 \Rightarrow 5\times4\times$

$2^6 = 2\times2\times2\times2\times2\times2 \Rightarrow 2\times6\times$

Laws of Exponent

1) $a^n \times a^n = a^{n+n}$ eg

2) $\frac{a^m}{a^n} = a^{m-n}$ eg

3) $(a^m)^n = a^{mn}$ eg

4) $(ab)^m = a^m b^n$

5) $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}, b \neq 0$

6) $\boxed{a^0 = 1}$

7) $a^{-m} = \frac{1}{a^m}$.

Q.1) $(3^0 + 4^{-1}) \times 2^2$

$\left(1 + \frac{1}{4}\right)2^2 \Rightarrow \left(\frac{4+1}{4}\right)4 \Rightarrow \frac{5}{4}\times4 \Rightarrow 5$ Ans.

Scientific Notation

$0.1 = \frac{1}{10} = 10^{-1}$, $0.01 = \frac{1}{100} = 10^{-2}$, $0.00001 = \frac{1}{100000} = 10^{-5}$

write in usual form

1.785×10^7

$\frac{1785}{1000} \times 10^7$

$\frac{1785}{10^3} \times 10^7$

write in Scientific notation

67000000000000

67×10^7

$\frac{67}{10} \times 10^8$

6.7×10^8 Ans

Hots

2> $\frac{1}{1+a^{m-n}} + \frac{1}{1+a^{n-m}}$.

Solu. $\frac{1}{1+\frac{a^m}{a^n}} + \frac{1}{1+\frac{a^n}{a^m}}$

$\frac{1}{\frac{a^n+a^m}{a^n}} + \frac{1}{\frac{a^n+a^m}{a^n}}$

$\frac{a^n}{a^n+a^m} + \frac{a^m}{a^n+a^m}$

$\frac{a^n+a^m}{a^n+a^m}$

$= 1$ Ans.

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