



ST. LAWRENCE HIGH SCHOOL



TOPIC –Laws of Indices

Subject : Mathematics

Class-9

F. M. 15

WORKSHEET NO. - 1

First term

Date: 16.01.2021

Q.1) Choose the correct option:

(1x15=15)

- i) If $3^x = 9^y$ then the value of $x : y$ is
a) 1 : 1 b) 1 : 2 c) 2 : 1 d) 4 : 1
- ii) If $4^x = 8$, then the value of x is
a) 2 b) 1/2 c) 3/2 d) 3
- iii) If $3^{2x} = 81$, then the value of 3^{-x} will be
a) 1/3 b) 1/9 c) 1/4 d) 2
- iv) If $4 \times 5^x = 500$, then the value of x^x is
a) 8 b) 1 c) 64 d) 27
- v) If $4^{2x} = 8^2$, then the value of x is
a) 3/2 b) 2 c) 3 d) 1
- vi) If $2 \times 5^x = 5 \times 2^x$, then the value of x is
a) 0 b) 1 c) 2 d) 5
- vii) If $9 \times 3^x = (27)^{2x-5}$ then the value of x is
a) 17/5 b) 13/5 c) 9/5 d) 3/5
- viii) If $20^{-x} = 1/7$, which one of the following is the value of $(20)^{2x}$
a) 1 b) 7 c) 49 d) 1/49
- ix) If $4^x = 8^{1/3}$, then the value of x will be
a) 2/3 b) 3/2 c) 2 d) 1/2
- x) If $4^x = 8^3$, then the value of x is
a) 3/2 b) 9c)3 d) 9/2
- xi) Solve $25^x = 5^3$
a) 3/2 b) 1/2 c) 0 d) 1/4
- xii) If $2^{x+1} + 2^{x-2} = 9$, then which one of the following is the value of x
a) 1 b) 2 c) 0 d) 1/2
- xiii) Solve $2^{x+3} \cdot 3^{x-3} = 64$
a) 3 b) 8 c) 27 d) 64
- xiv) Which one of the following is the value of $2^{1/2} \cdot 4^{1/4} \cdot 16^{-1/4}$
a) 1 b) 2 c) 4 d) 1/2
- xv) If $10^{2x} = 25$, then the value of 10^{-x}
a) 1/5 b) 1/25 c) 5 d) 1/4

-Chaitali Roy