# INTERNATIONAL INDIAN SCHOOL BURAIDAH 

## Worksheet for the Academic Year 2024-25 <br> CLASS: X SUBJECT: MATHEMATICS DATE: 01-04-2024

LESSON:01-REAL NUMBERS

## Level 1:

1. Find the LCM of the smallest prime number and smallest odd composite number is ----
2. Given that $\operatorname{LCM}(91,26)=182$, then $\operatorname{HCF}(91,26)=-----$
3. If $a \& b$ are two positive co-prime integers such that $a=12 b$, then $\operatorname{HCF}(a, 12)=$
4. If $2^{3} \times 3^{a} \times b \times 7$ is the prime factorization of 2520 . Then $5 a+2 b=-------$
5. Find the HCF and LCM of $26,65,117$ using prime factorization.
6. If the product of two co-prime numbers is 217 , Find their LCM.
(Ans: 217)
7. The ratio between the HCF and LCM of $5,15,20$ is $\qquad$
8. Find the LCM of 96 and 360 by using the fundamental theorem of arithmetic.
(Ans: 1440)
9. Find the LCM and HCF of the following pairs of integers and verify that, LCM $\times$ HCF $=$ Product of integers:
a) $320 \& 84$
b) $196 \& 144$

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\text { (Ans: a) LCM-6720, HCF- } 4 \text { \& b) LCM-7056, HCF-4) }
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10. The HCF of two numbers is 113 and their LCM is 56952 . If one number is 904, find the other number.
(Ans: 7119)
11. Given that $\sqrt{3}$ is an irrational, prove that $2 \sqrt{3}-1$ is an irrational number.
12. Given that $\sqrt{2}$ is irrational, prove that $(3+3 \sqrt{2})$ is an irrational number.
13. Find the LCM of numbers whose prime factorization is expressible as $3 \times 5^{2}$ and $3^{2} \times 7^{2}$.
(Ans: 11025)
14.If two positive integers $x \& y$ are expressible in terms of primes as $x=p^{2} q^{3}$ and $y=p^{3} q$, what can you say about their LCM and HCF? Is LCM a multiple of HCF? Explain?
14. On a morning walk, three persons step off together and their steps measure $40 \mathrm{~cm}, 42 \mathrm{~cm}$ and 45 cm respectively. What is the minimum distance each should walk so that each can cover the same distance and complete steps?
15. The length, breadth, and height of a room are $8 \mathrm{~m} 25 \mathrm{~cm}, 6 \mathrm{~m} 75 \mathrm{~cm}$, and 4 m 50 cm respectively. Find the length of the longest rod that can measure the three dimensions of the room exactly.
(Ans: 75 cm )
16. Complete the following factor tree and find the composite number $x$.
(i)

(ii)

(Ans: (i)585 (ii) 150)

## Level 2:

18. Prove that $\sqrt{2}+\sqrt{3}$ is irrational.
