**INTERNATIONAL INDIAN SCHOOL BURAIDAH**

Work Sheet - 2025-26

CLASS: X

SUBJECT: MATHEMATICS

Chapter 01 - REAL NUMBERS

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1. If HCF(336 ,54)=6 ,Find the LCM (336,54) (Ans:3024)
2. Find the LCM of the smallest prime number and smallest odd composite number is ---- (Ans: 18)
3. Given that LCM (91,26) = 182, then HCF (91,26) = ------ (Ans: 13)
4. If a & b are two positive co-prime integers such that a = 12 b, then HCF(a,12) = ---------- (Ans: 12)
5. If $2^3 \times 3^a \times b \times 7$ is the prime factorization of 2520. Then 5a + 2b =-------- (Ans: 20)
6. Find the HCF and LCM of 26,65,117 using prime factorization. (Ans: 13,1170)
7. If the product of two co-prime numbers is 217, Find their LCM. (Ans: 217)
8. The ratio between the HCF and LCM of 5,15,20 is --------- (Ans: 1:12)
9. Find the LCM of 96 and 360 by using the fundamental theorem of arithmetic. (Ans: 1440)
10. Find the LCM and HCF of the following pairs of integers and verify that, LCM × HCF = Product of integers:
    a) 320 & 84 b) 196 & 144
    (Ans: a) LCM-6720, HCF- 4 & b) LCM-7056, HCF-4)
11. Write the smallest number which is divisible by both 306and 657(Ans:22338)
12. The HCF of two numbers is 113 and their LCM is 56952. If one number is 904, find the other number. (Ans: 7119)
13. Given that $\sqrt{3}$ is an irrational, prove that $2\sqrt{3}-1$ is an irrational number.
14. Given that $\sqrt{2}$ is irrational, prove that $(3 + 3\sqrt{2})$ is an irrational number.
15. Show that $3\sqrt{7}$ is an irrational number.
16. Prove that $\frac{2+\sqrt{3}}{5}$ is an irrational number,Given that $\sqrt{3}$ is an irrational number.

17. Find the LCM of numbers whose prime factorization is expressible as $3\times 5^2$ and $3^2 \times 7^2$. (Ans: 11025)

18. If two positive integers x & y are expressible in terms of primes as $x = p^2q^3$ and $y = p^3q$, what can you say about their LCM and HCF? Is LCM a multiple of HCF? Explain?

19. On a morning walk, three persons step off together and their steps measure 40cm,42cm and 45cm respectively. What is the minimum distance each should walk so that each can cover the same distance and complete steps? (Ans: 2520cm)

20. The length, breadth, and height of a room are 8m 25cm, 6m 75 cm, and 4m 50cm respectively. Find the length of the longest rod that can measure the three dimensions of the room exactly. (Ans: 75cm)

21. Explain why (17 X5 X11 X3 x2+2 X 11) is a composite number
22. Prove that $\sqrt{2} + \sqrt{3}$ is irrational
23. Three sets of English,Hindi and Sociology books dealing with cleanliness have to stacked in such a way that all the books are stored topic wise and height of each stack is the same .The number of English books is 96,number of Hindi books is 240 and the number of Sociology books is 336.Assuming that the books are of same thickness , determine the number of stacks of English ,Hindi and Sociology books. (Ans : 2 ,5 ,7 )
24. Three alarm clocks ring at intervals of 4 ,12 and 20 minutes respectively.If they start ringing together, after how much time will they ring together ?
25. In a seminar on the topic ' liberty and equality' the number of participants from Hindi ,Social Science and English department are 60 , 84 and 108 , respectively. Find the minimum number of rooms required if in each room the same numbers of participants are to be seated and all of them being in the same subject. (Ans:21)