

CBSE |Class X|Maths Worksheet|Number systems

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NUMBER SYSTEMS

- 1) What is the condition for the decimal expansion of a rational number to terminate? Explain with an example.
- 2) State Euclid's Division Lemma.
- 3) Find the LCM of 90 and 225 by prime factorisation method.
- 4) Given that $\text{HCF}(1152, 1664) = 128$, Find $\text{LCM}(1152, 1664)$.
- 5) Show that $5 - 2\sqrt{3}$ is an irrational number.
- 6) The HCF and LCM of two numbers are 9 and 360 respectively. If one of the numbers is 45, find the other number.
- 7) Prove that $\sqrt{3}$ is an irrational number.
- 8) Show that $2\sqrt{3}$ is an irrational number.
- 9) Using Euclid's Division Algorithm, find the HCF of 504 and 980.
- 10) Find the LCM and HCF of integers 336 and 54 and verify that $\text{LCM} \times \text{HCF} = \text{product of the two numbers}$.
- 11) Using prime factorisation method, find the HCF and LCM of 72, 126 and 168, Also show that $\text{HCF} \times \text{LCM} \neq \text{Product of three numbers}$.
- 12) In order to celebrate Van Mahotsav, the students of a Kendriya Vidyalaya planned to plant two types of trees in the Vidyalaya park. They decided to plant 144 trees of type A and 84 trees of type B. If the two types of plants are to be in the same number of columns, find the maximum number of columns in which they can be planted. What values do these students possess?
- 13) Show that any positive odd integer is of the form $6q + 1$, or $6q + 3$, or $6q + 5$, where q is some integer.
- 14) Consider the numbers $4n$, where n is a natural number. Check whether there is any value of n for which $4n$ ends with the digit zero.
- 15) Find the HCF and LCM of 6, 72 and 120, using the prime factorization method.