
CLASS: X
SUBJECT: MATHEMATICS

TOPIC: REAL NUMBERS

1. If $7 \times 5 \times 3 \times 2 + 3$ is composite number? Justify your answer
2. Show that any positive odd integer is of the form $4q + 1$ or $4q + 3$ where q is a positive integer
3. Prove that $\sqrt{2} + \sqrt{5}$ is irrational
4. Use Euclid's Division Algorithms to find the H.C.F of
a) 135 and 225 (45)
b) 4052 and 12576 (4)
c) 270, 405 and 315
5. Prove that $5 - 2\sqrt{3}$ is an irrational number
6. Find the HCF and LCM of 26 and 91 and verify that $\text{LCM} \times \text{HCF} = \text{Product of two numbers}$ (13,182)
7. Explain why $\frac{29}{2^3 \times 5^3}$ is a terminating decimal expansion
8. given that $\text{LCM}(77, 99) = 693$, find the HCF (77, 99) (11)
9. Find the greatest number which exactly divides 280 and 1245 leaving remainder 4 and 3 (138)
10. Prove that $\sqrt{2}$ is irrational
11. The LCM of two numbers is 64699, their HCF is 97 and one of the numbers is 2231. Find the other (2813)
12. If $\text{HCF}(6, a) = 2$ and $\text{LCM}(6, a) = 60$ then find a (20)
13. Two numbers are in the ratio 15: 11. If their HCF is 13 and LCM is 2145 then find the numbers (195,143)
14. Express 0.363636..... in the form a/b (4/11)
15. Find the HCF 52 and 117 and express it in form $52x + 117y$
16. Write the HCF of smallest composite number and smallest prime number
17. Write whether $\frac{2\sqrt{45} + 3\sqrt{20}}{2\sqrt{5}}$ on simplification give a rational or an irrational number