CLASS- X Assignment No. 1

Real Numbers

Q1. State "Euclid's Division Lemma" and Use it to find the H.C.F of 18 and 24.

[Ans :- $a = bq + r$, $0 \leq r < b$; 6]

Q2. Use Euclid's division algorithm to find the H.C.F of 615 and 154. [Ans :- 1]

Q3. By the method of prime factorisation, find the H.C.F and L.C.M of 12, 15, 21

[Ans :- HCF = 3, LCM = 420]

Q4. If H.C.F (8, 36) = 4, find LCM

[Ans :- 72]

Q5. By applying the Fundamental theorem of Arithmetic, find the HCF of 125 and 425 hence find their LCM also

[Ans :- HCF = 25 ; LCM = 2125]

Q6. Show that any positive odd integer is of the form $6q+1$ or $6q+3$ or $6q+5$ where q is some integer

Q7. Explain why $7 \times 11 \times 13 + 13$ and $7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5$ are composite numbers.

Q8. Prove that $\sqrt{2}$ is not a rational number.

Q9. Show that $2 - \sqrt{3}$ is irrational Number

Q10. Show that $3\sqrt{5}$ is not a rational Number.