

# Maths Work Sheet

Class - X

Chapter:- Real Numbers

**Q01 :** Find the smallest number which when divided by 30, 40 and 60 leaves the remainder 7 in each case.

**Q02 :** The dimensions of a room are 6 m 75 cm, 4 m 50 cm and 2 m 25 cm. Find the length of the largest measuring rod which can measure the dimensions in exact number of times.

**Q03 :** The HCF of 2 numbers is 75 and their LCM is 1500. If one of the numbers is 300, find the other.

**Q04 :** Prove that  $\sqrt{6}+\sqrt{5}$  is irrational.

**Q05 :** Can 72 and 20 respectively be the LCM and HCF of two numbers. Write down the reason.

**Q06 :** If  $a$  and  $b$  are two prime numbers, write their HCF and LCM.

**Q07 :** If  $p$  and  $q$  are two coprime numbers, write their HCF and LCM.

**Q08 :** Without actual division, state whether the decimal form of  $\frac{539}{5^3 \times 2^2 \times 7^2}$  is terminating OR recurring.

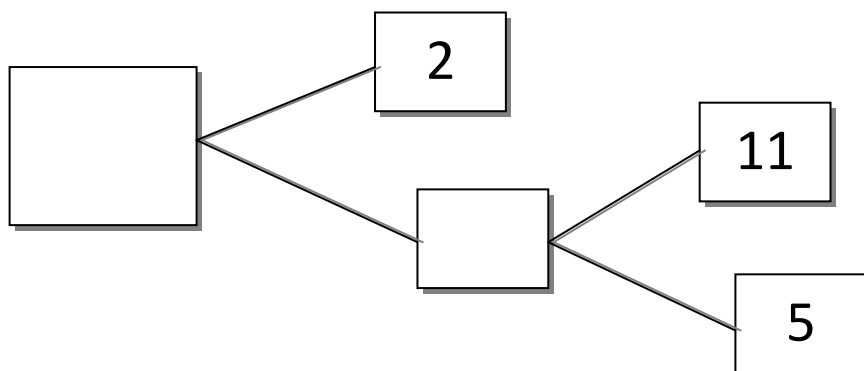
**Q09 :** Find the HCF and LCM of 350 and 400 and verify that  $\text{HCF} \times \text{LCM} = \text{Product of the numbers}$ .

**Q10 :** Simplify:  $\frac{2\sqrt{45}+3\sqrt{20}+10\sqrt{125}}{2\sqrt{5}}$

**Q11 :** Write down 5 irrational numbers in radical form which are lying between 4 and 5.

**Q12 :** Write down 2 rational numbers lying between  $\sqrt{2}$  and  $\sqrt{3}$ .

**Q13 :** Complete the missing entries in the following factor tree.



**Q14 :** Prove that  $\sqrt{p} + \sqrt{q}$  is irrational if  $p$  and  $q$  are prime numbers.

**Q15 :** Find the largest number which divides 245 and 1205 leaving the remainder 5 in each case.

**Q16 :** Find the largest number which divides 303, 455 and 757 leaving the remainder 3, 5 and 7 respectively.

**Q17 :** Prove that  $\sqrt{5}$  is irrational.

**Q18 :** Prove that  $6 - 2\sqrt{5}$  is irrational.

**Q19 :** Find the HCF and the LCM of the following by prime factorization.

a) 360 , 756

b)  $2x^4y^3z$  ,  $32x^3y^4p^2$

**Q20 :** Find the HCF by Euclid's Division Algorithm.

a) 256 , 352

b) 450 , 500 , 625

**Q21 :** Explain why  $7 \times 11 \times 13 + 13$  is a composite number.

**Q22 :** Show that any positive odd number is of the form  $6q + 1$ ,  $6q + 3$  or  $6q + 5$ , where  $q$  is an integer.

**Q23 :** Show that the square of any positive integer is of the form  $3m$  or  $3m + 1$ , where  $m$  is an integer.

**Q24 :** Use Euclid's division lemma to show that the cube of any positive integer is of the form  $9m$ ,  $9m + 1$ ,  $9m + 8$ , where  $m$  is an integer.

**Q25 :** There are 3 consecutive traffic lights which turn "green" after every 36, 42 and 72 seconds. They all were at "green" at 9:00 AM. At what time will they all turn "green" simultaneously?