

Chapter-1 Real Numbers

WORKSHEET-1

1. Show that the number $5 \times 11 \times 17 + 3 \times 11$ is a composite number.
2. 2^n & 5^n end with digit zero for which value of n?
a) All integers b) All natural no. c) All real no. d) No value of n is possible
3. Check whether 5^n can end with the digit zero for any natural number n.
4. The HCF of 85 and 238 is expressible in the form $85m - 238$. Find the value of m.
5. If two positive integer p and q can be expressed as $p = 18a^2b^4$ & $q = 20a^3b^2$, where a and b are prime numbers. Find LCM (p,q).
6. Given that HCF (306,657)= 9 , find LCM (306,657).
7. The LCM of two numbers is two times of their HCF. If the product of the numbers is 7200, then find the HCF & LCM of two numbers.
8. HCF of two given numbers a & b is 14, then their LCM cannot be:
a) 98 b) 168 c) 108 d) 154
9. The ratio of two numbers is 4:5 and their HCF is 8. Find their LCM.
10. Prove that $\sqrt{11}$ is an irrational number.
11. If $\sqrt{3}$ is an irrational number, then show that $2 + 3\sqrt{3}$ is also an irrational number.
12. Prove that $\frac{1}{\sqrt{2}}$ is an irrational number.
13. Find the largest number which divides 70 & 125 leaving remainders 5 & 8 respectively.
14. In a teachers workshop, the number of teacher teaching French , hindi and English are 48,80 & 144 respectively. Find the minimum number of rooms required if in each room the same number of teachers are seated and all of them are of the same subject.
15. Three containers containing 54 litres, 84 litres, 108 litres of milk. Find the measurement of the largest cup that can measure the mlk of the above containers exactly.

16. In school activity, 3 friends start running together in the same direction and measurements of their each step is 72cm, 80cm, and 84cm respectively. What is the minimum distance each should run, so that they can cover the distance in complete steps?
17. Three sets of English, Hindi and Maths books have to be stacked in such a way that all the books are stored subject wise and number of books in each stack is same. The number of English, Hindi and Math books are 192, 240 & 168 respectively. Find the numbers of stacks for English, Hindi and Maths book.
18. A charitable trust donates 28 different books of Maths, 16 of Science and 12 of SST to poor students. Each student is given maximum number of books of only one subject of their interest and each student gets equal number of books.
- Find the number of books each student got
 - Find the total number of students who got the books.
19. Three cars start from the same starting point at different speeds. The first car starts at 1:00pm at a speed of 30 Km/h, the second car starts at 6:00pm at the speed of 40 Km/h & the third car starts at 9:00pm at the speed of 50 Km/h. Find the time at which 3 cars pass each other.
20. An army contingent of 1000 members is to march behind an army band of 56 members in a parade. The two groups are to march in the same number of columns. What is the maximum number of columns in which they can march?