

CLASS-X

WORKSHEET

CHAPTER-1

REAL NUMBERS

- Q1. What is the H.C.F of the smallest composite number and the smallest prime number?
- Q2. If 'p' is a prime number then what is the L.C.M of p, p^2, p^3 ?
- Q3. Two positive integers 'p' and 'q' can be expressed as $p=ab^2$ and $q=a^2b$, a and b are prime numbers. What is the L.C.M of 'p' and 'q' ?
- Q4. Show that n^2-1 is divisible by 8, if 'n' is an odd positive integer ?
- Q5. Prove that n^2-n is divisible by 2 for every positive integer 'n' ?
- Q6. Show that one and only one out of $n, n+2$ or $n+4$ is divisible by 3, where n is any positive integer ?
- Q7. Prove that one of every three consecutive positive integers is divisible by 3 ?
- Q8. Find the H.C.F of 65 and 117 and express it in the form $65m+117n$?
- Q9. If the H.C.F of 210 and 55 is expressible in the form of $210x+55y$, find 'y' ?
- Q10. Find the largest positive integer that will divide 398, 436 and 542 leaving remainders 7, 11 and 15 respectively .
- Q11. Find the greatest number of six digits exactly divisible by 24, 15 and 36 ?
- Q12. Three sets of English, Hindi and Mathematics books have to be stacked in such a way that all the books are stored topic wise and the height of each stack is the same. The number of English books is 96, the number of Hindi books is 240 and the number of Mathematics books is 336. Assuming that the books are of same thickness, determine the number of stacks of English, Hindi and Mathematics books ?

Q13. Two brand of chocolates are available in packs of 24 and 15 respectively . If I need to buy an equal number of chocolates of both kinds , what is the least number of boxes of each kind I would need to buy?

Q14. Prove that $\sqrt{2} + \sqrt{5}$ is irrational .

Q15. Using Euclid's Division Algorithm , find whether the pair of numbers 847 and 2160 are co-prime or not .

ANSWERS

- 1) 2 2) P^3 3) a^2b^2 10) 17 11) 999720 12) 2,5,7
13) 5,8