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 210*5 + 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