# CLASS-X
# MATHEMATICS WORKSHEET
# CHAPTER-1: REAL NUMBERS

VERY SHORT ANSWER TYPE QUESTIONS

Q1. What is the H.C.F of the smallest composite number and the smallest prime number? (CBSE 2018)
Q2. If 'p' is a prime number then what is the L.C.M of p, $p^2$, $p^3$?
Q3. The product of a non-zero rational and an irrational number is always .
Q4. After how many decimal places the decimal expansion of the rational number 14587/1250 will terminate?
Q5. "The product of three consecutive positive integers is divisible by 6". True or False. Justify.
Q6. Can two numbers have 18 as their HCF and 380 as their LCM? Give reason.

SHORT ANSWER TYPE QUESTIONS

Q7. Two positive integers 'a' and 'b' can be expressed as $a = x^3y^2$ and $b = xy^3$ x and y are prime numbers .What is the L.C.M and H.C.F of a and b? (CBSE 2019)
Q8. Prove that if x and y are both odd positive integers, then $x^2 + y^2$ is even but not divisible by 4.
Q9. Prove that $n^2 - n$ is divisible by 2 for every positive integer 'n'.
Q10. Prove that one of every three consecutive positive integers is divisible by 3.
Q11. Find the H.C.F of 65 and 117 and express it in the form 65m+117n.
Q12. If the H.C.F of 210 and 55 is expressible in the form of 210×5 + 55y, find 'y'.
Q13. Find the largest positive integer that will divide 398, 436 and 542 leaving remainders 7, 11 and 15 respectively.
Q14. Find the greatest number of six digits exactly divisible by 24, 15 and 36.
Q15. 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.
Q16. Two brands 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?
Q17. Given √2 is irrational, prove that 5 + 3√2 is an irrational number. (CBSE 2018)
Q18. Using Euclid's Division Algorithm, find the HCF of 1260 and 7344. (CBSE 2019)
Q19. Find HCF and LCM of 404 and 96 and verify that HCF × LCM = Product of the two given numbers. (CBSE 2018)

LONG ANSWER TYPE QUESTIONS

Q20. Show that one and only one out of n, n+2 or n+4 is divisible by 3, where n is any positive integer.

ANSWERS

1. 2
2. $p^3$
3. Irrational
4. 4
5. True
6. No
7. $x^3y^3$, $xy^2$
11. 13
12. - 19
13. 17
14. 999720
15. 2, 5, 7
16. 5, 8
18. 36
19. 4, 9696