WORKSHEET ON CHAPTER -1 (REAL NUMBERS)

1. Define pie.

2. State Fundamental Theorem of Arithmetic.

3. Write 98 as product of its prime factors.

4. Write the exponent of 2 in the prime factorization of 144.

5. Write the sum of the exponents of prime factors in the prime factorization of 98.

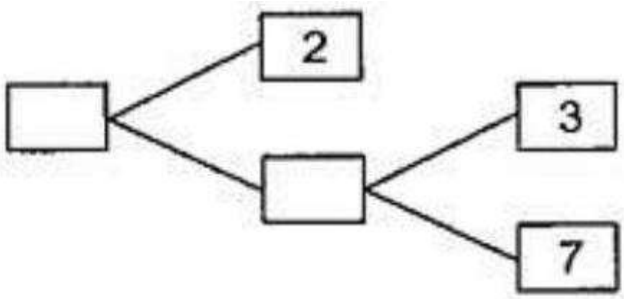
6. If the prime factorization of a natural number n is $2^3 \times 3^2 \times 5^2 \times 7$, write the number of consecutive zeros in n.

7. If the product of two numbers is 1080 and their HCF is 30, find their LCM.

8. Write the condition to be satisfied by q so that a rational number $\frac{p}{q}$ has a terminating decimal expansion.
   [CBSE 2008]

9. Write the condition to be satisfied by q so that a rational number $\frac{p}{q}$ has a nonterminating decimal expansion.

10. Complete the missing entries in the following factor tree.



[CBSE 2008]

11. The decimal expansion of the rational number $\frac{43}{2^4 \times 5^3}$ will terminate after how many places of decimals?
    [CBSE 2009]

12. Has the rational number $\frac{441}{2^2 \times 5^7 \times 7^2}$ a terminating or a nonterminating decimal representation?
    [CBSE 2010]

13. Write whether $\frac{2\sqrt{45}+3\sqrt{20}}{2\sqrt{5}}$ on simplification gives a rational or an irrational number.
    [CBSE 2010]

14. What is an irrational number?

15. What is a real number?

16. If p and q are two prime numbers, then what is their HCF?

17. If p and q are two prime numbers, then what is their LCM?

18. What is the total number of factors of a prime number?

19. What is a composite number?

20. What is the HCF of the smallest composite number and the smallest prime number?

21. HCF of two numbers is always a factor of their LCM (True/False).

22. π is an irrational number (True/False).

23. The sum of two prime numbers is always a prime number (True/False).

24. The product of any three consecutive natural numbers is divisible by 6 (True/False).

25. Every even integer is of the form $2m$, where m is an integer (True/False).

26. Every odd integer is of the form $2m - 1$, where m is an integer (True/False).

27. The product of two irrational numbers is an irrational number (True/False).

28. The sum of two irrational numbers is an irrational number (True/False).

29. For what value of n, $2^n \times 5^n$ ends in 5.

30. If a and b are relatively prime numbers, then what is their HCF?

31. If a and b are relatively prime numbers, then what is their LCM?

32. Two numbers have 12 as their HCF and 350 as their LCM (True/False).

ANSWER				
1. See text	2. See text	3. 2×7^2	4. 4	
5. 3	6.2	7.36		
8. The prime factorization of q must be of the form $2^m \times 5^n$, where m, n are non-negative integers.				
non-negative integers.		10. 42,21	11.4	
12. Non-terminating 13. Rational Number			16.1	
17. $p \times q$	18.2	20.2	21. True	
22. True	23. False	24. True	25. True	
26. True	27. False	28. False	29. No value of n	
30.1	31. ab	32. False		