INTERNATIONAL INDIAN SCHOOL, RIYADH

CLASS: X TOPIC: REAL NUMBERS

SUBJECT: MATHEMATICS

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1. If 7 x 5 x 3 x 2 + 3 is composite number? Justify your answer

2. Show that any positive odd integer is of the form 4q + 1 or 4q + 3 where q is a positive integer

3. Show that 8^n cannot end with the digit zero for any natural number n

4. Prove that $\frac{3\sqrt{2}}{5}$ is irrational

5. Prove that 5 – 2 √3 is an irrational number

6. Prove that √2 is irrational

7. Prove that √2 + √3 is irrational

8. Use Euclid's Division Algorithms to find the H.C.F of 408 and 1032 (24)

9. Using Euclid's division algorithm, check whether the pair of numbers 50 and 20 are co-prime or not.

10. Find the HCF and LCM of 26 and 91 and verify that LCM X HCF = Product of two numbers (13,182)

11. Explain why $\frac{29}{2^3 \times 5^3}$ is a terminating decimal expansion

12. Find HCF of 96 and 404 by prime factorization method. Hence, find their LCM. (4, 9696)

13. Using prime factorization method find the HCF and LCM of 72, 126 and 168 (6, 504)

14. If HCF (6, a) = 2 and LCM (6, a) = 60 then find a (20)

15. given that LCM (77, 99) = 693, find the HCF (77, 99) (11)

16. Find the greatest number which exactly divides 280 and 1245 leaving remainder 4 and 3 (138)

17. The LCM of two numbers is 64699, their HCF is 97 and one of the numbers is 2231. Find the other (2813)

18. Two numbers are in the ratio 15 : 11. If their HCF is 13 and LCM is 2145 then find the numbers (195,143)

19. Express 0.363636…… in the form a/b (4/11)

20. Write whether $\frac{2\sqrt{45} + 3\sqrt{20}}{2\sqrt{5}}$ on simplification give a rational or an irrational number

21. State whether 10.064 is rational or not. If rational, express in p/q form (1258/125)

22. Write a rational number between √2 and √3

23. State the fundamental theorem of arithmetic

24. The decimal expansion of the rational number $\frac{74}{2^3 . 5^4}$ will terminate after ……. Places

25. Find the H.C.F of 52 and 117 and express it in the form 52 x + 117 y. (-2 , 1)

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