## STD X

EXTRA SUGGESTIVE QUESTIONS

1. Find the HCF of 52 and 117 and express it in form 52x + 117y.

2. Prove that $x^2 - x$ is divisible by 2 for all positive integer x.

3. If m and n are odd positive integers, then $m^2 + n^2$ is even, but not divisible by 4. Justify.

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

5. If remainder of $\dfrac{(5m+1)(5m+3)(5m+4)}{5}$ is a natural number, then find it.

6. If n is any prime number and a^2 is divisible by n, then n will also divide a. Justify.

7. Find the missing numbers in prime factors tree.
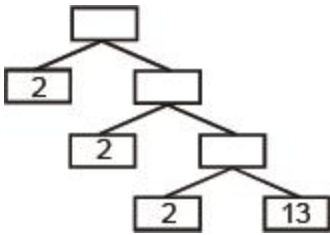
8. Find the greatest number of 5 digits exactly divisible by 12, 15 and 36.

9. Find the smallest number which when increased by 20 is exactly divisible by 90 and 144.

10. Find the smallest number which leaves remainder 8 and 12 when divided by 28 and 32 respectively.

11. Floor of a room is to be fitted with square marble tiles of the largest possible size. The size of the room is 10 m × 7 m. What should be the size of tiles required that has to be cut and how many such tiles are required?

12. If the HCF of 408 and 1032 is expressible in the form 1032p – 408 × 5 find p.

1. 13, 13 = 52 (-2) + 117 × 1; x = -2, y = 1	4. 20	5. 2	7. 104, 52, 26
8. 99900	9. 700	10. 204	11. 1 m × 1 m and 70
12. p = 2			