HCF & LCM operations

1. *Find LCM and HCF of 30, 72 & 432*

   HCF = 6

   LCM = 2160

2. Find the second Highest common factor of the three numbers.

3. Find the third highest common factor of the three numbers.

4. Find the number which when reduced by ten gives LCM.

5. Which the number which when doubles gives LCM

6. Find the smallest number which is exactly divisible by 30, 72 & 432.

7. Find the number just larger than the smallest number which is exactly divisible by 30, 72 & 432.

8. Find the number just larger than the smallest number which is exactly divisible by 30, 72 & 432 , and the number itself should also be divisible by 30, 72 & 432.

9. Find the number which is ten more than smallest number which is exactly divisible by 30, 72 & 432.

10. FInd the greatest 4 digit numbers which is exactly divisible by 30, 72 & 432.

11. Find the greatest 3 digit number which is exactly divisible by 30, 72 & 432.

12. Find the greatest 5 digit number which is exactly divisible by 30, 72 & 432.

13. Find the smallest number which is exactly divisible by 30, 72 & 432 and 7.

14. Find the largest number which divides 438 and 606, leaving remainder 6 in each case.

432 and 600. HCF = 24

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15. Find the largest number which divides 439 and 607, leaving remainder 7 in each case

16. Find the number which divides 438 and 606, leaving remainder 6 in each case.

Count the number of zeros at the end:

1. 5 X 4

2. 5 X 4 X 2

3. 5 X 4 X 20

Previous Year Board Questions

1. Prove that $3 + \sqrt{2}$ is an irrational number.

2. Prove that $\sqrt{5}$ is an irrational number.

3. Prove that $7 + 3\sqrt{2}$ is not a rational number.

4. Prove that $2 - 3\sqrt{5}$ is an irrational number.

5. Find HCF and LCM of 13 and 17 by prime factorisation method.

6. Find LCM of numbers whose prime factorisation are expressible as
   3×5^2 and $3^2 \times 7^2$

7. Find the largest number which divides 70 and 125 leaving remainder 5 and 8 respectively

8. Find the prime factorisation of the denominator of rational number expressed as 6.12 in simplest form

9. Three bells toll at intervals of 9, 12, 15 minutes respectively. If they start tolling together, after what time will they next toll together?

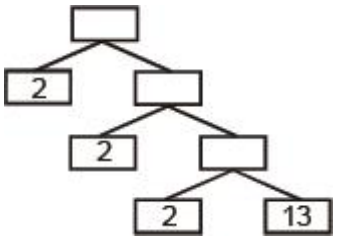
10. Two tankers contain 850 liters and 680 liters of petrol. Find the maximum capacity of a container which can measure the petrol of each tanker in the exact number of times

11. The length, breadth, and height of a room are 8 m 50 cm, 6 m 25 cm and 4 m 75 cm respectively. Find the length of the longest rod that can measure the dimensions of the room exactly.

12. Find the HCF and LCM of 306 and 657 and verify that LCM × HCF = Product of the two numbers. (2016 D)

TEST

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 m2 + n2 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 $\frac{(5m+1)(5m+3)(5m+4)}{5}$ is a natural number, then find it.
6. If n is any prime number and a2 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.

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