MATHS

BOOKS - KALYANI MATHS (ASSAMESE ENGLISH)

HIGHEST COMMON FACTOR (HCF) OF TWO POSITIVE INTEGERS

Example

1. Using Euclid's algorithm determine the HCF of 2079 and 1680.

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2. A labourer was engaged for a certain number of days for Rs. 5750 but being absent on some of these days he was paid only Rs.5000. What is the maximum daily wages?

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3. There are 616 guests in a very large dining hall and there are 128 their bearers to serve them. The guests are arranged to sit in lines of equal number of persons.

If the number of lines of the guests are maximum and equal number of bearers are provided to each line to serve ,what is the number of guest in a line?

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4. Check whether 6^n can end with the digit 0 for any natural number n.

5. Can there exist natural numbers m and n for which $15^m \, 16^n$ can end with zero?

6. The sum of two natural numbers is 40 their HCF and LCM are 5 and 75, respectively. Find them.

7. Three persons walk along a circle and require 10m, 15m and 18 m respectively to complete the circle. They start to walk along the circle from the same point and at the

same time. Find after what time they meet again at the starting point for the first time.

Exercise

1. Using Euclid's algorithm determine the H.C.F of

143,481

Also find the co-prime pairs

2. Using Euclid's algorithm determine the H.C.F

of

384,1296

Also find the co-prime pairs

3. Using Euclid's algorithm determine the H.C.F

of

314,159

Also find the co-prime pairs

4. Using Euclid's algorithm determine the H.C.F

of

4144,7696

Also find the co-prime pairs

5. Using Euclid's algorithm determine the H.C.F

of

3587,1819

Also find the co-prime pairs

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6. Using Euclid's algorithm determine the H.C.F

of

847,2160

Also find the co-prime pairs

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7. Using Euclid's algorithm determine the H.C.F

of

5141,4081

Also find the co-prime pairs

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8. Using Euclid's algorithm determine the H.C.F

of

788,256

Also find the co-prime pairs

9. A labourer was engaged for a certain number of days for Rs.7000. But being absent on some of these he was paid only Rs.5040. What is the maximum daily wages?

10. There are 1479 guestsin a very large dining hall and there are 128 number of bearers to serve. The guest are arranged to set in lines of

equal number of persons. If the number of lines of guest are maximum and equal number of pairs are provided to serve each line ,what is the number of guest in a line?

11. A rectangular courtyard is 20 m 48 cm long and 9m 60cm broad. It is to be paved with square stones of same size. Find the least possible number of such stone.

12. Find the greatest number which divides 1478, 2703,4052 leaving remainders 8, 15 and 20 respectively.

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13. Find the greatest number which divides 6637, 5423 and 8260 leaving remainders 7 ,8 and 10 respectively.

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14. Examine whether 6^n can end with five for n,n belongs to natural number.

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15. Examine whether 8^n can end with zero for any n,n belongs to natural number.

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16. The product of two numbers having HCF as 15 is 17325. Find the numbers.

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17. The product of two numbers is 12960 and HCF of the numbers is 36. Find the possible number of pairs.

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18. The sum of two numbers is 256 and their HCF is 32. If each of the number is greater than 32 . Find the numbers.

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19. Find the least number that is divisible by all the numbers between 1 and 8.

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20. Find the least number greater than 400 which is divisible by 12, 15.

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21. The difference of a pair of number is 10 and their HCF is 5 and LCM is 175 ,find the numbers.

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22. The sum of two numbers is 75 and their HCF is 15 and LCM is 90 Find the number.