



MATHS

NCERT - NCERT

MATHEMATICS(Hinglish)

PLAYING WITH NUMBERS

Exercise 3 6

1. What is the HCF of two consecutive(a)
numbers? (b) even numbers? (c) odd

numbers?



Watch Video Solution

2. 1) what is the HCF of 2 consecutive numbers
(i) numbers (ii) even nos (iii) odd nos
2) HCF of co-prime numbers 4 and 15 was found as follows
by factorisation : and since there is no
common prime factor, so HCF of 4 and 15 is 0.
Is the answer correct? If not, what is the
correct HCF?



Watch Video Solution

3. Find the HCF of the following numbers :(a)

18, 48

(b) 30, 42

(c) 18,

60

(d) 27, 63

(e) 36, 84

(f) 34, 102

(g) 70, 105, 175

(h) 91, 112, 49

(i) 18, 54, 81

(j) 12, 45,

75



Watch Video Solution

Exercise 3 5

1. In which of the following expressions, prime

factorisation has been done?(a) $24 = 2 \times 3 \times$

4 (b) $56 = 7 \times 2 \times 2 \times 2$ (c) $70 = 2 \times 5 \times$

7 (d) $54 = 2 \times 3 \times 9$



Watch Video Solution

2. Which factors are not included in the prime

factorisation of a composite number?

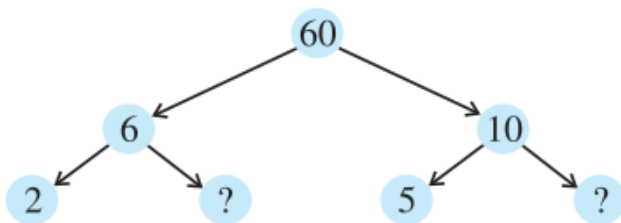


Watch Video Solution

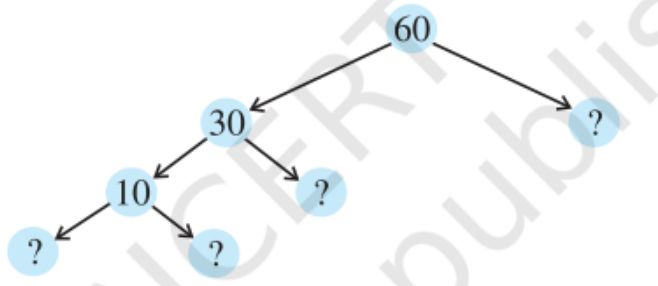
3. Here are two different factor trees for 60.

Write the missing numbers.

(a)



(b)



[Watch Video Solution](#)

4. Which of the following statements are true?

- (a) If a number is divisible by 3, it must be divisible by 9.
- (b) If a number is divisible by 9, it must be divisible by 3.
- (c) A number is divisible by 18, if it is divisible by both 3 and 6.
- (d) If a number is divisible by 9 and 10 both, then it must be divisible by 90.
- (e) If two numbers are co-primes, at least one of them must be prime.
- (f) All numbers which are divisible by 4 must also be divisible by 8.
- (g) All numbers which are divisible by 8 must also be divisible by 4.
- (h) If a number exactly divides two numbers

separately, it must exactly divide their sum.(i)

If a number exactly divides the sum of two numbers, it must exactly divide the two numbers separately.



[Watch Video Solution](#)

5. The product of three consecutive numbers is always divisible by 6. Verify this statement with the help of some examples.



[Watch Video Solution](#)

6. Find all the prime factors of 1729 and arrange them in ascending order. Now state the relation, if any; between two consecutive prime factors.



[Watch Video Solution](#)

7. Write the smallest 5-digit number and express it in the form of its prime factors.



[Watch Video Solution](#)

8. Write the greatest 4-digit number and express it in terms of its prime factors.



[Watch Video Solution](#)

9. The sum of two consecutive odd numbers is divisible by 4. Verify this statement with the help of some examples.



[Watch Video Solution](#)

10. 18 is divisible by both 2 and 3. It is also divisible by $2 \times 3 = 6$. Similarly, a number is divisible by both 4 and 6. Can we say that the number must also be divisible by 24? If not, give an example to justify your answer.



Watch Video Solution

11. Determine if 25110 is divisible by 45.



Watch Video Solution

12. I am the smallest number, having four different prime factors. Can you find me?



[Watch Video Solution](#)

Exercise 3 7

1. The traffic lights at three different road crossings change after every 48 seconds, 72 seconds and 108 seconds respectively. If they change simultaneously at 7 a.m., at what time will they change simultaneously again?



[Watch Video Solution](#)

2. Find the LCM of the following numbers :(a)

9 and 4 (b) 12 and 5 (c) 6 and 5 (d) 15

and 4 Observe a common property in the

obtained LCMs. Is LCM the product of

two numbers in each case?



[Watch Video Solution](#)

3. Find the LCM of the following numbers in which one number is the factor of the other. (a) 5, 20 (b) 6, 18 (c) 12, 48 (d) 9, 45 What do you observe in the results obtained?



[Watch Video Solution](#)

4. Determine the smallest 3-digit number which is exactly divisible by 6, 8 and 12.



[Watch Video Solution](#)

5. Find the smallest 4-digit number which is divisible by 18, 24 and 32

A. 1052

B. 1152

C. 1512

D. 1125

Answer: B



Watch Video Solution

6. Find the least number which when divided by 6, 15 and 18 leave remainder 5 in each case.



[Watch Video Solution](#)

7. Determine the greatest 3-digit number exactly divisible by 8, 10 and 12. and 6 ,8 and 10



[Watch Video Solution](#)

8. Three tankers contain 403 litres, 434 litres and 465 litres of diesel respectively. Find the maximum capacity of a container that can measure the diesel of the three containers exact number of times.

A. 7

B. 13

C. 62

D. 31

Answer: D



[Watch Video Solution](#)

9. Three boys step off together from the same spot. Their steps measure 63 cm, 70 cm and 77 cm respectively. What is the minimum distance each should cover so that all can cover the distance in complete steps?



[Watch Video Solution](#)

10. Renu purchases two bags of fertiliser of weights 75 kg and 69 kg. Find the maximum value of weight which can measure the weight of the fertiliser exact number of times.



Watch Video Solution

11. The length, breadth and height of a room are 825 cm, 675 cm and 450 cm respectively. Find the longest tape which can

measure the three dimensions of the room exactly.



[Watch Video Solution](#)

Exercise 3 2

1. Write five pairs of prime numbers less than 20 whose sum is divisible by 5. Hint : $3+7 = 10$)



[Watch Video Solution](#)

2. Express each of the following numbers as the sum of three odd primes:(a) 21 (b) 31
(c) 53 (d) 61



[Watch Video Solution](#)

3. Fill in the blanks :(a) A number which has only two factors is called a _____.(b) A number which has more than two factors is called a _____.(c) 1 is neither _____ nor _____.(d) The smallest prime number is _____.(e) The

smallest composite number is ____.(f) The smallest even number is _____.



Watch Video Solution

4. Express the following as the sum of two odd primes.(a) 44 (b) 36 (c) 24 (d) 18



Watch Video Solution

5. Give three pairs of prime numbers whose difference is 2.[Remark : Two prime numbers whose difference is 2 are called twin primes]



[Watch Video Solution](#)

6. Write down separately the prime and composite numbers less than 20.



[Watch Video Solution](#)

7. What is the greatest prime number between 1 and 10?



[Watch Video Solution](#)

8. State whether the following statements are True or False:

(a) The sum of three odd numbers is even.

(b) The sum of two odd numbers and one even number is even.

(c) The product of three odd numbers is odd.

(d) If an even number is divided by 2, the quotient is always odd

(e) All prime numbers are odd.

(f) Prime numbers do not have any factors.

(g) Sum of two prime numbers is always even

(h) 2 is the only even prime number.

(i) All even numbers are composite numbers.

(j) The product of two even numbers is always even



Watch Video Solution

9. What is the sum of any two

(a) Odd numbers

(b) Even Numbers ?



Watch Video Solution

10. Which of the following numbers are prime?

(a) 23

(b) 51

(c) 37

(d) 26





[Watch Video Solution](#)

11. Write seven consecutive composite numbers less than 100 so that there is no prime number between them.



[Watch Video Solution](#)

Exercise 3 1

1. Find all the multiples of 9 upto 100.



[Watch Video Solution](#)

2. Match the items in column 1 with the items in column 2.

Column 1

(i) 35

(ii) 15

(iii) 16

(iv) 20

(v) 25

Column 2

(a) Multiple of 8

(b) Multiple of 7

(c) Multiple of 70

(d) Factor of 30

(e) Factor of 50

(f) Factor of 20



Watch Video Solution

3. Write all the factors of the following numbers : (a) 24 (b) 15 (c) 21(d) 27 (e) 12 (f) 20(g) 18 (h) 23 (i) 36



[Watch Video Solution](#)

4. Write First Five Multiples of:(a) 5 (b) 8 (c) 9



[Watch Video Solution](#)

Exercise 3 3

1. Write a digit in the blank space of each of the following numbers so that the number formed is divisible by 11 : (a) 92_389
(b) 8_9484



Watch Video Solution

2. Using divisibility tests, determine which of the following numbers are divisible by 2; by 3; by 4; by 5; by 6; by 8; by 9; by 10 ; by 11 (say, yes

or no):

Number	Divisible by								
	2	3	4	5	6	8	9	10	11
128	Yes	No	Yes	No	No	Yes	No	No	No
990
1586
275
6686
639210
429714
2856
3060
406839



[Watch Video Solution](#)

3. Using divisibility tests, determine which of following numbers are divisible by 6:

(a) 297144

(b) 1258

(c) 4335

(d) 61233

(e) 901352

(f) 438750

(g) 1790184

(h) 12583

(i) 639210

(j) 17852



Watch Video Solution

4. Using divisibility tests, determine which of the following numbers are divisible by 4; by 8:

(a) 572 (b) 726352 (c) 5500 (d)

6000 (e) 12159(f) 14560 (g) 21084

(h) 31795072 (i) 1700 (j) 2150



[Watch Video Solution](#)

5. Write the smallest digit and the greatest digit in the blank space of each of the

following numbers so that the number formed is divisible by 3 : (a) (b)



Watch Video Solution

6. Using divisibility tests, determine which of the following numbers are divisible by 11: (a) 5445 (b) 10824 (c) 7138965 (d) 70169308 (e) 10000001 (f) 901153



Watch Video Solution

Exercise 3 4

1. Find the common factors of :

(a) 20 and 28

(b) 15 and 25

(c) 35 and 50

(d) 56 and 120



[Watch Video Solution](#)

2. Find the common factors of : (a) 4, 8 and

12 (b) 5, 15 and 25



[Watch Video Solution](#)

3.3. Find first three common multiples of :

(a) 6 and 8

(b) 12 and 18



[Watch Video Solution](#)

4. Write all the numbers less than 100 which are common multiples of 3 and 4.



[Watch Video Solution](#)

5. A number is divisible by both 5 and 12. By which other number will that number be always divisible?



[Watch Video Solution](#)

6. A number is divisible by 12. By what other numbers will that number be divisible ?



[Watch Video Solution](#)

7. Which of the following numbers are co-prime?

(a) 18 and 35

(b) 15 and 37

(c) 30 and 415

(d) 17 and 68

(e) 16 and 215

(f) 81 and 16



[Watch Video Solution](#)

1. Find the common multiples of 3, 4 and 9.



[Watch Video Solution](#)

2. In a morning walk, three persons step off together. Their steps Measure 80 cm, 85 cm and 90 cm respectively. What is the minimum distance each should walk so that all can cover the same distance in complete steps?



[Watch Video Solution](#)

3. Two tankers contain 850 litres and 680 liters of kerosene oil Respectively. Find the maximum capacity of a container which can measure the kerosene oil of both the tankers when used an exact number of times.



[Watch Video Solution](#)

4. Find the LCM of 20, 25 and 30



[Watch Video Solution](#)

5. Find the least number which when divided by 12, 16, 24 and 36 leaves a remainder 7 in each case.

A. 151

B. 121

C. 141

D. 111

Answer: A



Watch Video Solution

6. Write all the factors of 68.



[Watch Video Solution](#)

7. Find the factors of 36.



[Watch Video Solution](#)

8. Find the common factors of 75, 60 and 210



[Watch Video Solution](#)

9. Find the LCM of 12 and 18



Watch Video Solution

10. Find the LCM of 24 and 90.



Watch Video Solution

11. Find the LCM of 40, 48 and 45



Watch Video Solution

12. Write first five multiples of 6.



Watch Video Solution

13. Write all the prime numbers less than 15.



Watch Video Solution