NCERT Solutions for 5th Class Maths Chapter 6-Be My Multiple, I'll Be Your Factor

NCERT Solutions for 5th Class Maths Chapter 6-Be My Multiple, I'll Be Your Factor

Class 5: Maths Chapter 6 solutions. Complete Class 5 Maths Chapter 6 Notes.

NCERT Solutions for 5th Class Maths Chapter 6-Be My Multiple, I'll Be Your Factor

NCERT 5th Maths Chapter 6, class 5 Maths Chapter 6 solutions

Page 87

The Mouse and the Cat

https://www.indcareer.com/schools/ncert-solutions-for-5th-class-maths-chapter-6-be-my-multiple-ill-be-your-factor/

(a)The steps on which the mouse jumps:

Ans. The mouse jumps on following steps:

14, 16,18, 20, 22, 24, 26 and 28

(b)The steps on which the cat jumps:

Ans. The cat jumps on following steps:

3, 6, 9,12,15, 18, 21, 24, 27 and 30

(c) The steps on which both the cat and the mouse jump:

Ans. Both cat and the mouse jump on following steps:18 and 24

(d) Can the mouse get away?

Ans. Yes, because they never come together at steps 18 and 24. So, the mouse safely gets away.

Find Out

1.If the cat starts from the 5th step and jumps five steps at a time and the mouse starts from the 8th step and jumps four steps at a time, can the mouse get away?

Ans. Cat jumps the following steps:

5,10,15,20,25

Tbe mouse jumps the following steps:

8,12,16,20,24

Both of them reach the step 20 after four jumps. Hence, the mouse will not get away.

Page 88

Who is Monto Waiting for?

1. Monto cat is waiting for somebody. Do you know for whom he is waiting? There is a trick to find out.

(a)Mark with a red dot all the numbers which can be divided by 2.

(b)Mark a yellow dot on the numbers which can be divided by 3 and a blue dot on numbers which can be divided by 4.

(c)Which are the boxes which have dots of all three colours?

(d)What are the letters on top of those boxes?

(e)Write those letters below in order.

Ans. Let us mark red with R, yellow with Y and blue with B.

1	2R	3 Y	4 R B	5	6 R Y	7	8 R B	9 Y	10 R
11	**12 R Y B**	13	14 R	15 Y	16 R B	17	18 R Y	19	20 R B
21 Y	22 R	23	**24 R Y B**	25	26 R	27 Y	28 R B	29	30 R Y
31	32 R B	33 Y	34 R	35	**36 R Y B**	37	38 R	39 Y	40 R B
41	42 R Y	43	44 R B	45 Y	46 R	47	**48 R Y B**	49	50 R
51 Y	52 R B	53	54 R Y	55	56 R B	57 Y	58 R	59	**60 R Y B**

12, 24, 36, 48 and 60 have all the three colours.

The following letters are written on these numbers:

MOUSE

Hence, Monto cat is waiting for the MOUSE.

Page 89

Meow Game

To play this game, everyone stands in a circle. One player calls out ‘one’. The next player says ‘two’ and so on. A player who has to call out 3 or a number which can be divided by 3 has to say ‘Meow’ instead of the number. One who forgets to say ‘Meow’ is out of the game. The last player left is the winner.

1.Which numbers did you replace with ‘Meow’?

Ans. 3, 6, 9,12, 15, 18, 21, 24,

These are the multiples of 3.

2.Play the game by changing the number to 4. Now which numbers did you replace with Meow ?

Ans. 4, 8,12,16, 20, 24, 28, 32,

These are multiples of 4.

3.Write any ten multiples of 5.

Ans. Following are the 10 multiples of 5:

5,10,15, 20, 25, 30, 35, 40, 45 and 50

Page 90

Dice Game

1.Throw two dice together. What are the numbers that turn up on the faces of the dice? Make a two-digit number using them. If it is a multiple of any of the

numbers written next to the circles, you can write it in that circle. Then it is your friend's turn. The one who can write more numbers in 10 rounds is the winner.

Hint: I have 3 and 2 on my dice. If I make 23, it is not the multiple of any of the numbers. So I will make 32, which is a multiple of 4, and write it in the red circle,

Ans. Following are some examples:

6:12,24,36,42 5:15,25,35,45

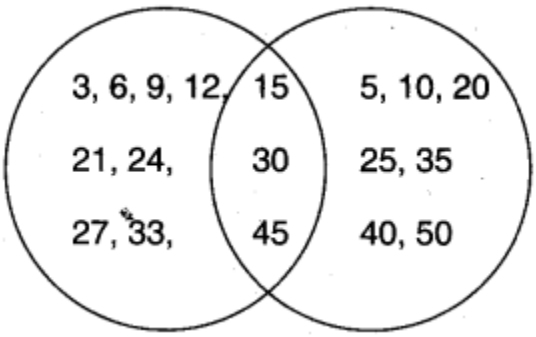
4:12,16,24,32 7:14,21,35,42

Page 91

Common Multiples

1.Think of a number. If it is a multiple of 3 write it in the red circle. If it is a multiple of 5 write it in the blue circle.

Ans.



2.Where do I write 15? It is a multiple of both 3 and 5.

Ans. We put 15 in the purple part.

Some numbers are multiples of both 3 and 5 and hence they are common to both 3 and 5.

Think! If you can write the multiples common to 3 and 5 in the purple part, then will they still be in both the red and the blue circles?

3.Which is the smallest among these common multiples?

Ans. 15

Repeat the game using the numbers 2 and 7.

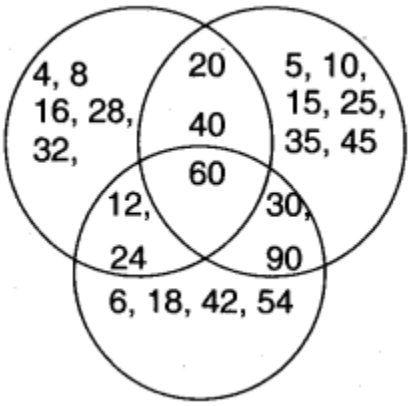
4.Write the common multiples of 2 and 7.

Ans. Following are the common multiples of 2 and 7:

14,28,42,56,70,……

5.Repeat the game by putting the multiples of 4, 6 and 5 in the circles.

Ans.



6.What common multiples of 5 and 6 did you write in the green part?

Ans. 30 and 90.

7.What common multiples of 4 and 6 are written in the orange part?

Ans. 12 and 24.

8.In which coloured part did you write the common multiples of 4, 5 and 6?

Ans. They are written in the grey part.

9.What is the smallest common multiple of 4, 5 and 6?

Ans. 60.

Page 92

Puzzle

Tamarind Seeds

1.Sunita took some tamarind (imli) seeds. She made groups of five with them, and found that one seed was left over. She tried making groups of six and groups of four. Each time one seed was left over. What is the smallest number of seeds that Sunita had?

Ans. In the previous question we have seen that the smallest common multiple of 4, 5 and 6 is 60.

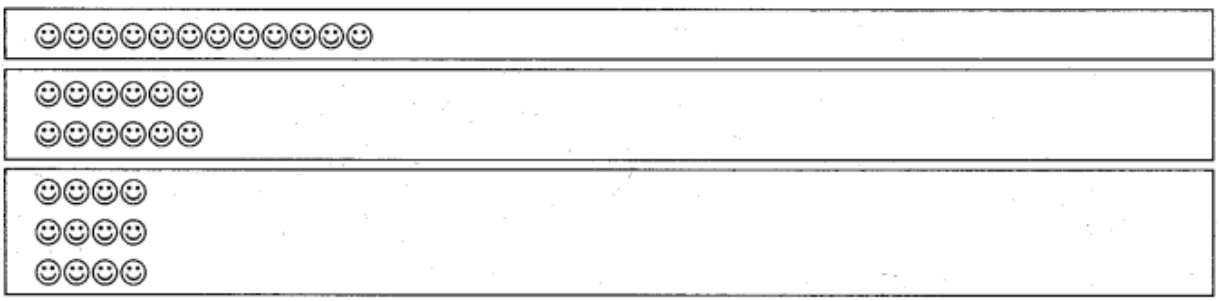
Hence, the smallest number of seeds which Sunita has is 60 +1 = 61

Pages 93-94

More Tamarind Seeds

1.Ammini is arranging 12 tamarind seeds in the form of different rectangles. Try to make more rectangles like this using 12 tamarind seeds. How many different rectangles can you make?If there are 15 tamarind seeds how many rectangles can you make?

Ans. Three rectangles can be made using 12 seeds.



If there are 15 tamarind seeds, we have rectangles of following sizes: 1 x 15, 3 x 5

Hence, there will be two rectangles.

Colouring the Grid

In the grid here, a rectangle made of 20 boxes is drawn.

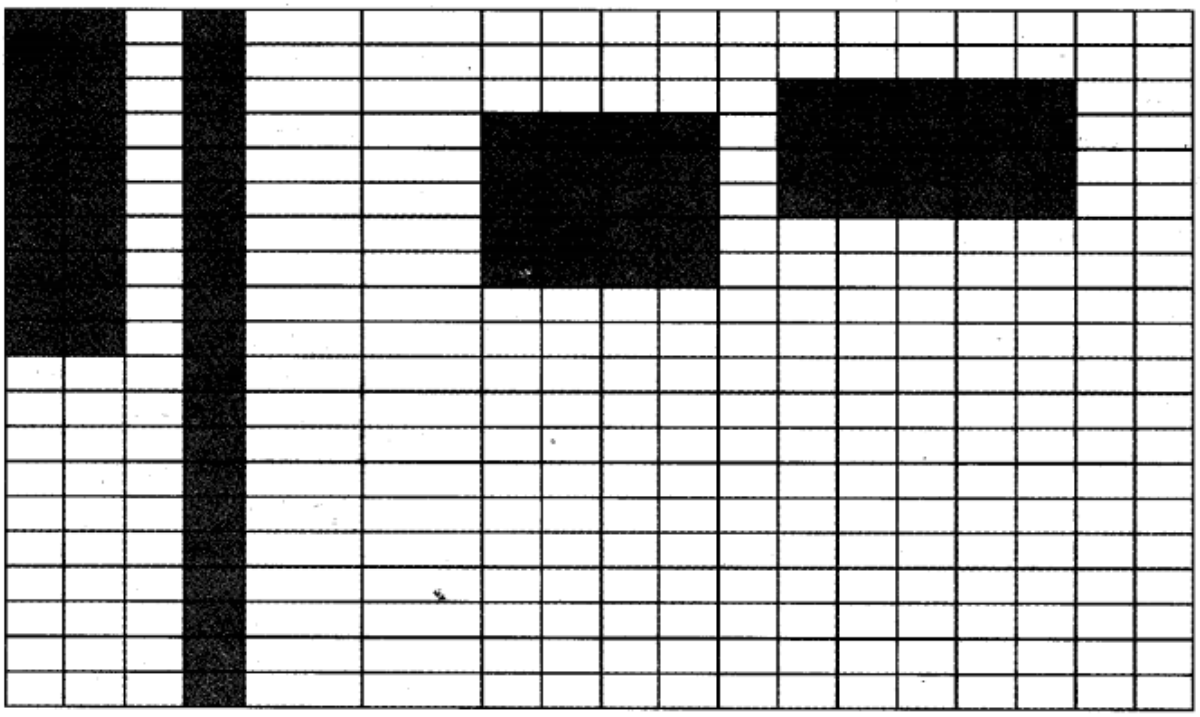
The width of this rectangle is 2 boxes.

1.What is its length?

Ans. The length is 10 boxes.

2. Colour a rectangle made of 20 boxes in some other way.

Ans. It can be shown by the following grid.



3.What is the length and width of the rectangle you coloured?

Ans. Rectangles of following length and width can be made: 5 x 4 , 20 x 1

4.In how many ways can you colour a rectangle of 20 boxes? Colour them all in the grid, and write the length and width of each rectangle you have coloured.

Ans. This can be done in three ways: 10 x 2 , 20 x 2 And 5 x 4

NCERT 5th Maths Chapter 6, class 5 Maths Chapter 6 solutions

Page 94

Bangles

There Eire 18 bangles on the rod. Meena is trying to group them. She can put them in groups of 2, 3, 6, 9 and 18 without any bangle being left.

1.How many groups will she have if she makes groups of 1 bangle each?

Ans. 18 groups of 1 bangle each.

2.Now complete the table, for different numbers of bangles. For each number see what different groups can be made.

Ans.

Number of bangles	*Different groups we can make*
18	1, 2, 3, 6, 9, 18
24	1, 2, 3, 4, 6, 8, 12, 24
5	1, 5
9	1, 3, 9
7	1, 7
2	1, 2
10	1, 2, 5, 10
1	1
20	1, 2, 4, 5, 10, 20
13	1, 13
21	1, 3, 7, 21

Pages 95-96

Fill the Chart

1.Complete the multiplication chart given here:

Ans.

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	1	2	3	4	5	6	7	8	9	10	11	**12**
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	**12**	15	18	21	24	27	30	33	36
4	4	8	**12**	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	**12**	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	**12**	24	36	48	60	72	84	96	108	120	132	144

Look at the green boxes in the chart. These show how we can get 1£ by multiplying different numbers.

12 = 4 x 3, so 12 is a multiple of both 3 and 4.12 is also a multiple of-6 and 2, as well as 12 and 1. We pay 1, 2, 3, 4, 6, and 12 are factors of 12.

2.What are the factors of 10?

Ans. The factors of 10 are: 1, 2, 5,10.

3.Can you do this from the chart?

Ans. Yes, we can find it from the chart also.

4.What are the factors of 36?

https://www.indcareer.com/schools/ncert-solutions-for-5th-class-maths-chapter-6-be-my-multiple-ill-be-your-factor/

Ans. The factors of 36 are: 1, 2, 3, 4, 6, 9,12,18 and 36.

5.Find out all the factors of 36 from the multiplication chart.

Ans. From the table we can get:

36 = 3 x 12

36 = 4 x 9

36 = 6 x 6

36 = 9 x 4

36 = 18 x 2

The following factors are not from the table: 1 x 36

Hence, factors of 36 are:

1, 2, 3, 4, 6, 9, 12,18 and 36

6.What is the biggest number for which you can find the factors from this chart? The biggest number for which we can find the factors from tins chart?

Ans. The biggest number for which can find factor from the chart is 144.

7.What can you do for numbers bigger than that?

Ans. The number should be reduced by division method.

Then we can use the table for getting further fractions.

For example: let us factorize 180 180 = 2 x 90 Now from the table:

90 = 2 x 45 45 = 3 x 15 15 = 3 x 5

Hence, the factors for 180 are: 1, 3, 5, 6, 9,12,15, 20, 30, 45, 60,180

2	180
2	90
3	45
3	15
5	5
	1

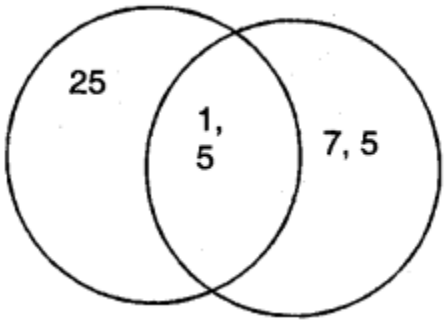
NCERT 5th Maths Chapter 6, class 5 Maths Chapter 6 solutions

Page 96

Common Factors

1.Write the factors of 25 in the red circle and the factors of 35 in the blue circle.

Ans.

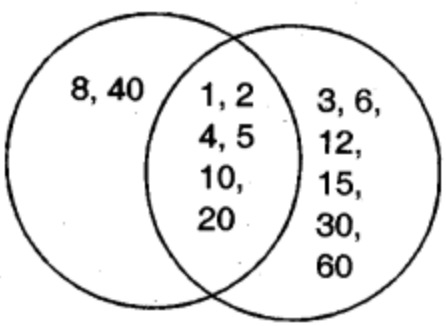


2.Which are the factors you have written in the common part of both circles? These are common factors of 25 and 35.

Ans. 1 and 5.

3.Now write the factors of 40 in the red circle and 60 in the blue circle.

Ans.



4.What are the factors written in the common part of the circle? Which is the biggest common factor of 40 and 60?

Ans. The factors written in common part of the circle are;1, 2, 4, 5,10 and 20

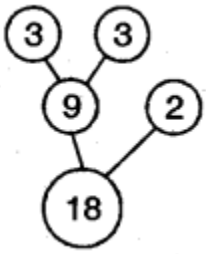
The biggest common factor of 40 and 60 is 20.

NCERT 5th Maths Chapter 6, class 5 Maths Chapter 6 solutions

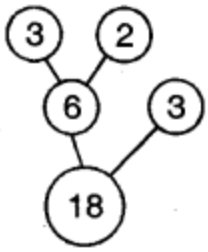
Page 97

Factor Tree

1.Look at the factor tree. Now you can make another tree like this?

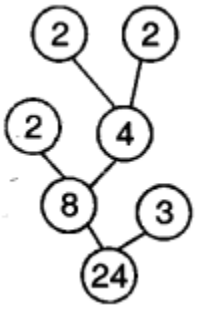


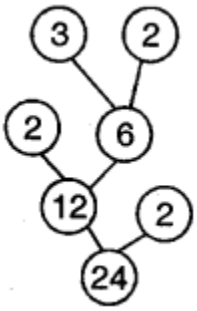
Ans.

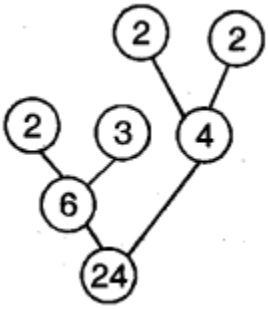


2.In how many ways can you draw a factor tree for 24? Draw three of them below.

Ans.

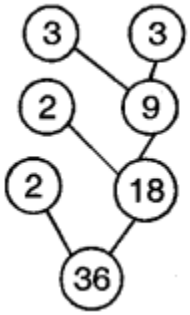


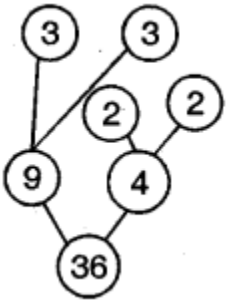


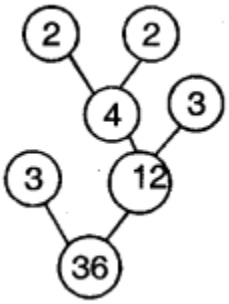


3.Try drawing the factor tree using other numbers also.

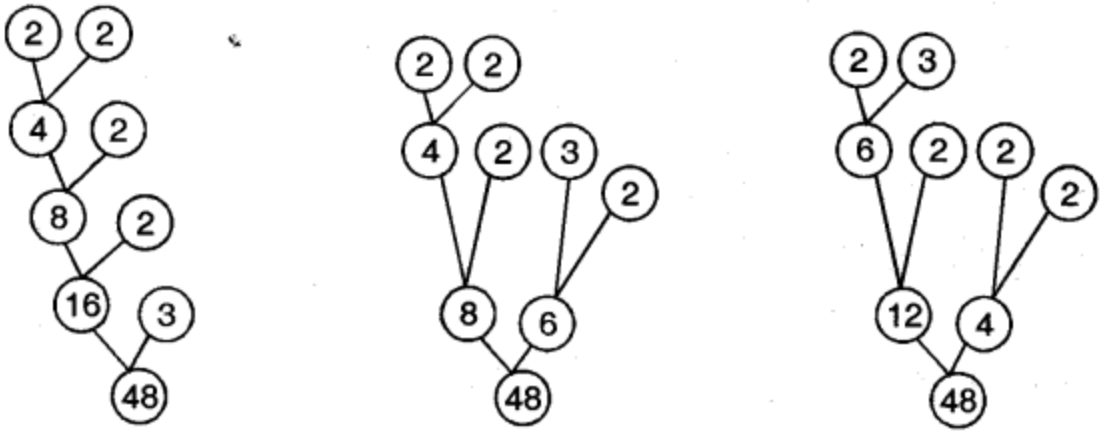
Ans. 36 can be factorized as given factor trees.







48 can be factorized as given factor trees.



Page 97

Tiling Problems

1.There is a garden in Anu's house. In the middle of the garden there is a path. They decided to tile the path using tiles of length 2 feet, 3 feet and 5 feet.

The mason tiled the first row with 2 feet tiles, the second row with 3 feet tiles and the third row with 5 feet tiles. The mason has not cut any of the tiles. Then what is the shortest length of the path?

Ans. The smallest common multiple of 2, 3 and 5 is the shortest length of the path.

Multiples of 2: 2, 4, 6, 8, 10,12,14, 16,17, 18, 20, 22, 24, 26, 28, 30

Multiples of 3: 3, 6, 9,12, 15, 18, 21, 24, 27, 30

Multiples of 5: 5, 10, 15, 20, 25, 30

The smallest common multiple is 30.

Hence, the answer is 30 feet.

2. Manoj had made a new house. He wants to lay tiles on the floor. The size of the room is 9 feet x 12 feet. In the market, there are three kinds of square tiles: 1 foot x 1 foot, 2 feet x 2 feet and 3 feet x 3 feet. Which size of tile should he buy for his room, so that he can lay it without cutting?

Ans. 2 is not a factor of 9 feet which is the width of the room.

1 and 3 are factors of both 9 and 12.

Hence, Manoj can buy tiles of 1 foot x 1 foot or 3 feet x 3 feet.

These tiles can be laid without cutting.

3. Rani, Geetha and Naseema live near each other. The distance from their houses to the road is 90 feet. They decided to tile the path to the road. They all bought tiles of different designs and length. Rani bought the shortest tile, Geetha bought the middle sized one and Naseema bought the longest one. If they could tile the path without cutting any of the tiles, what is the size of the tiles each has bought? Suggest 3 different solutions. Explain how you get this answer.

Ans. 90 can be factorized as follows:

90 = 1 x 90

90 = 2 x 45

90 = 3 x 30

90 = 5 x 18

90 = 6 x 15

90 = 9 x 10

Hence possible tiles can be as follows: 1 x 1, 2 x 2, 3 x 3, 5 x 5, 6 x 6, etc.

NCERT 5th Maths Chapter 6, class 5 Maths Chapter 6 solutions

Chapterwise NCERT Solutions for Class 5 Maths :

- Chapter 1: The fish Tale
- Chapter 2: Shapes and Angles
- Chapter 3: How Many Squares?
- Chapter 4: Parts and Wholes
- Chapter 5: Does it Look the Same?
- Chapter 6: Be My Multiple, I'll be Your Factor
- Chapter 7: Can You See the Pattern?
- Chapter 8: Mapping Your Way
- Chapter 9: Boxes and Sketches
- Chapter 10: Tenths and Hundredths
- Chapter 11: Area and its Boundary
- Chapter 12: Smart Charts
- Chapter 13: Ways to Multiply and Divide
- Chapter 14: How Big? How Heavy?

About NCERT

The National Council of Educational Research and Training is an autonomous organization of the Government of India which was established in 1961 as a literary, scientific, and charitable Society under the Societies Registration Act. The major objectives of NCERT and its constituent units are to: undertake, promote and coordinate research in areas related to school education; prepare and publish model textbooks, supplementary material, newsletters, journals and develop educational kits, multimedia digital materials, etc.Organise pre-service and in-service training of teachers; develop and disseminate innovative educational techniques and practices;collaborate and network with state educational departments, universities, NGOs and other educational institutions; act as a clearing house for ideas and information in matters related to school education; and act as a nodal agency for achieving the goals of Universalisation of Elementary Education.In addition to research, development, training, extension, publication and dissemination activities, NCERT is an implementation agency for bilateral cultural exchange programmes with other countries in the field of school education.Its headquarters are located at Sri Aurobindo Marg in New Delhi. Visit the Official NCERT website to learn more.