

# NCERT Solutions for 4th Class Maths Chapter 13-Fields And Fences

Class 4: Maths Chapter 13 solutions. Complete Class 4 Maths Chapter 13 Notes.

### NCERT Solutions for 4th Class Maths Chapter 13-Fields And Fences

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1. Rahmat needs to find the length of the boundary of the field.

Can you find it from this picture? See the length of each side

written near it.

Ans. Length of the boundary

= 9 metre + 15 metre + 21 metre + 9 metre = 54 metre

2. Rahmat bought a roll of 70 m wire for the fence.

Ganpat-Can you give me the wire that is left with you? I will use it for my field. How much wire did Rahmat give to Ganpat?

Ans. The total length of wire = 70 m

Wire used by Rahmat for boundary = 54 m

Wire left = 70 m - 54 m = 16 m

So, Rahmat gave 16 m wire to Ganpat.

3. Ganpat thanked Rahmat and started fencing his own field.

But he needed to get more wire.

(a) How long is the boundary of Ganpat's field?

Ans. The length of boundary of Ganpat's field

= 9m + 15m + 15m + 9m+18m = 66 m

(b) How much more wire will Ganpat need for his field?

Ans. Length of the Boundary of Ganpat's field = 66 m

Rahmat gave 16 m wire to Ganpat Need of the more length of wire = 66m-16m = 50m Ganpat needs 50 m more wire to boundary his field.



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**Practice Time** 

1. Here are pictures of some more fields. Find out which one has the longest boundary?

(a) Boundary = \_\_\_\_ metre?

Length of boundary = 15 metre + 6 metre + 15 metre + 24 metre = 60 metre



24 metre

(b) Boundary = \_\_\_\_\_metre ?

Boundary = 9 metre + 6 metre + 3 metre

+ 6 metre + 6 metre

+ 12 metre

= 42 metre





(c) Boundary = \_\_\_\_ metre?

#### Boundary = 9 metre + 12 metre + 15 metre

36 metre



- (d) Boundary = \_\_\_\_ metre?
- Boundary = 15 metre + 15 metre + 9 metre
- + 15 metre + 15 metre + 9 metre

#### = 78 metre





Therefore, field (d) has the longest boundary

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1. Chandu's father is called the 'yung old man' in his village. At 70 years of age, he is fully fit. Do you know his secret? He goes for a walk around the field every morning. Everyday he takes four rounds of Chandu's field.

What is the total distance he covers?





Ans. The boundary of the field = 150 m + 100 m + 150 m + 100 m = 500 m

The distance covered by young old man =  $4 \times 500 \text{ m} = 2000 \text{ m} = 2 \text{ km}$ 

Ganpat's wife works in a tailor's shop. She has to fix lace around a table cloth.

She bought a 100 metre roll of lace.

(a) Look at the picture of the table cloth and tell how much lace is used for one table cloth.



**Ans.** 1 m 50 cm = 100 cm + 50 cm = 150 cm

The length of lace required for one table cloth

- = 150 cm + 50 cm + 150 cm + 50 cm .
- = 400 cm = 4 metre

### (b) How much lace will be used in 3 such table cloths?

Ans. For 1 table cloth requirement of lace = 4m

Therefore, for 3 table cloth requirement of lace = 4m x 3 = 12m

#### (c) How much lace will be left in the roll?

Ans. Total length of lace = 100m



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Lace used to make 3 table cloths = 12m

Lace left after making of 3 table cloths = 100m - 12m = 88m

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#### Activity

1. Find out the length of the boundary of these shapes. (Hint: You can use a thread)



**Ans.** To find out the length of the boundary of the shapes given in the figure do the following-

- Take a thread.
- Place the thread carefully over the figure along boundary.



- Now cut the thread which is required to cover exactly the boundary of the figure.
- Now measure the length of the thread.
- Repeat the process with all figures.

Now count the squares to find out:

### (a) How many squares are there in each shape?

### Ans.

The number of complete square in figure -A = 1

The number of complete square in figure -B = 2

The number of complete square in figure -C = 3

The number of complete square in figure -D = 2

### (b) Which shape covers the least number of squares?

**Ans**. Figure A covers the least number of square which is 1.

### (c) Which shape covers the most number of squares?

**Ans.** The figure C covers the most number of square which is 3.

### 2. Take a 20 centimetre long thread. Make different shapes by joining the ends. Place on the squared sheet on the next page. ,

**Ans.** The different shapes made by placing the thread on squared sheet are shown in the figure given below:





#### Find Out:

#### (a) How many squares are there in each shape?

Ans. In figure A there are 14 complete squares

In figure B there are 4 complete squares In figure C there are 15 complete squares In figure D there are 10 complete squares

#### (b) Which is the biggest shape?

**Ans.** Figure 'C' is the biggest shape.

#### (c) Which is the smallest shape?

**Ans.** Figure 'B' is the smallest shape.

#### (d) How long is the boundary of each shape?



**Ans**. Measure the boundary of each shape by placing thread along the boundary of each shape.

#### 3. How many different shapes can you make by joining two squares? Draw them

#### on the squared sheet given below. How long is the boundary of each shape?

Ans. The shapes made by joining two squares are shown here



There are four types of shapes that can be made by joining two squares.

#### 4. Try this activity with three squares also.

Ans. Following types of shapes can be made by joining three squares.





Seven types of shapes can be made by joining three squares.

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**Practice Time** 

1. A square has a boundary of 12 cm.



### (a) From the corner of this square, a small square of side 1 cm is cut off. Will the boundary of B be less or more? Find its length.

Ans. The boundary of shape 'B' is equal to the boundary of shape 'C'

The boundary of 'B' = 12 cm.





### (b) If you cut a 1 cm square to get shape C, what will be the length of the boundary of C?

Ans. The boundary of shape 'C' will be equals to 14 cm.

#### 2. (a) Find the length of the boundary of square D.



Ans. The boundary of shape D = 5 cm + 5 cm + 5 cm = 20 cm

(b)8 squares of side 1 cm are cut out of the square D. Now it looks like shape E. What is the length of the boundary of shape E?





Ans. There are 21 edges measuring 1 cm of shape 'E'.

Hence, the boundary of shape 'E' = 1 cm x 21 = 21 cm

(c) The boundary of this



is\_\_\_\_+\_\_\_+\_\_\_Can we also say that the boundary is 4 x 1 cm?

The boundary of this

1 cm



= 1 cm + 1 cm + 1 cm + 1 cm = 4 cm

So, we can say the boundary of

1 cm

= 4×1 cm.

### 3. A hockey held is 91 metres 40 cm long and 55 metres wide. How long is the boundary of the held?

**Ans.** The length of the field = 91 metres 40 cm = 9100 cm + 40 cm

= 9140 cm.

The width of the held = 55 metre =  $55 \times 100 = 5500$  cm Therefore boundary = length + width + length + width

= 9140 + 5500 + 9140 + 5500 .





= 29280 cm

= 29280 -r 100 = 292 metre 80 cm

4. Usha and Valsamma are running a race. Usha is running on the inner circle. Valsamma is running on the outer circle.

Valsamma runs faster than Usha. But still she loses the race. Can you guess why?

**Ans.** Because inner circle has shorter boundary than outer circle. And Valsamma runs on the outer circle so, she has to cover more length. Because of this she loses the race.

### 5. Have you seen any race where runners start from different places – like in this picture? Guess why?

**Ans.** Yes I have seen the race which is organized in such circular track. Such arrangement is made to distances equal.

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#### **School Garden**

The students of Class III and IV thought of making a vegetable garden. They chose a place which looked like this.

Students of both the classes thought that garden 1 was bigger. So both wanted to take garden 1. Suddenly Neetu said-I think both gardens are equally big. Quite possible! Let us find out if you are right.

#### 1. How will Neetu find out if the two gardens are equally big?

**Ans.** Neetu place a long rope along the boundary of garden 1 and measure the length of the boundary. Again Neetu place the rope along with the boundary of garden 2 and measure its length.

Finally, she saw that the length of the boundaries of both gardens are equal. Hence, both the gardens are equal.



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#### Activity

1. Look at the table in your classroom. Guess how many Math-Magic books you can place on it.

(Remember-The books should not overlap. Do not leave gaps between the books)

(a) Write your guess here\_\_\_\_\_

Ans. About 8 books can be placed on the table. '

(b) Now check if your guess was right. How many books could you place?

**Ans.** 8.

(c) What is the difference between your guess and the actual number of books?

Ans. Nil.

2. Now look for another table.

(a) Is this table bigger than the last table? Yes/No

Ans. Yes.

(b) Make a guess how many Math-Magic books can be kept on this table\_\_\_\_\_

**Ans.** 12.

(c) Check if your guess was correct.

How many Math-Magic books could you keep?\_\_\_\_\_

**Ans.** 10.

(d) The difference between the sizes of the two tables is \_\_\_\_\_books.

**Ans.** The difference between the sizes of the two table is 2 books.



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3. (a) Ho w many Math-Magic books can be covered with one sheet of newspaper?

**Ans.** 4.

(b) Try covering your Math-Magic book with half a sheet of newspaper.

Ans. Do it yourself.

(c) Can you cover your book with a smaller sheet?

Ans. Yes.

(d) Find the smallest sheet which can cover your book. Check if your friend used a smaller sheet than you.

Ans. Do it yourself.

4. (a) Which is the biggest leaf in this

picture?





Ans. The leaf in the middle from the to p is the biggest leaf.

(b) Collect some leaves from the

garden. Place each of them here on

this squared sheet. Trace out their

edges and check how many squares

there are in each leaf.

Ans. Do it yourself.

(c) Which is the biggest leaf?

Ans. Do it yourself.

(d) Which is the smallest leaf?

Ans. Do it yourself.

5. (a) How many small squares of size 1 cm are there in this big green square?

Ans. There are 36 small squares of size 1 cm in this big square.

(b) Can you think of a faster way to know the total number of small squares without counting each.

Ans. There are six small squares at all sides of the big square.

So, total number of small square = 6 x 6 = 36

6. Guess how many squares of one centimeter can fill this blue rectangle.



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Write your guess here.\_\_\_\_

#### Check your guess by filling it with small squares.

**Ans.** 32 small squares can fill this blue rectangle.

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As there are 32 squares, so my guessed answer is correct.

### 7. Look at the picture. Can you divide it into 4 equal pieces? Each piece should have the same number of squares.

Ans. It can be divided into 4 equal pieces.

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#### Puzzle-A House and the Well

1. Raghavan has a piece of land.

There are 4 houses on his land and in the middle there is a well. He wants to divide this land equally among his four children. Each should get one house and be able to use the well without entering the, other's land. Can you help him divide the land?

#### Give different colours to each one's share.

**Ans.** The division is given here. In this division Raghavan's all the four children got equal share and they could use the well without entering in the other's land.







## Chapterwise NCERT Solutions for Class 4 Maths :

- <u>Chapter 1: Building with Bricks</u>
- Chapter 2: Long and Short
- Chapter 3: A Trip to Bhopal
- Chapter 4: Tick-Tick-Tick
- Chapter 5: The Way The World Looks
- Chapter 6: The Junk Seller
- Chapter 7: Jugs and Mugs
- Chapter 8: Carts and Wheels
- Chapter 9: Halves and Quarters
- Chapter 10: Play with Patterns
- Chapter 11: Tables and Shares
- Chapter 12: How Heavy? How Light?
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- Chapter 14: Smart Charts



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