## NCERT

## SOLUTIONS

## CLASS - 4th


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Class : 4th
Subject: Math
Chapter: 2
Chapter Name : Long and Short

Q1 Guess the distance between any two dots. How many centimetres is it? Now measure it with the help of a scale. Did you guess right?

Answer. The guessed distances between two dots are:
Between dots
A and $\mathrm{B}=2.5 \mathrm{~cm}$, A and $\mathrm{C}=3 \mathrm{~cm}, \mathrm{~A}$ and $\mathrm{D}=5.5 \mathrm{~cm}$
A and $\mathrm{E}=3.9 \mathrm{~cm}$, A and $\mathrm{F}=4.6 \mathrm{~cm}, \mathrm{~A}$ and $\mathrm{G}=4.5 \mathrm{~cm}$
$A$ and $\mathrm{H}=6 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{C}=5.5 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{D}=4.5 \mathrm{~cm}$
B and $\mathrm{E}=4.5 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{F}=8.5 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{G}=3.4 \mathrm{~cm}$
B and $\mathrm{H}=8 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{D}=8 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{E}=4 \mathrm{~cm}$
C and $\mathrm{F}=2.5 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{G}=9 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{H}=5 \mathrm{~cm}$
D and $\mathrm{E}=6.5 \mathrm{~cm}, \mathrm{D}$ and $\mathrm{F}=10 \mathrm{~cm}, \mathrm{D}$ and $\mathrm{G}=5 \mathrm{~cm}$
$D$ and $H=6.4 \mathrm{~cm}, E$ and $F=4.5 \mathrm{~cm}, E$ and $G=4 \mathrm{~cm}$
E and $\mathrm{H}=4 \mathrm{~cm}, \mathrm{~F}$ and $\mathrm{G}=8.5 \mathrm{~cm}, \mathrm{~F}$ and $\mathrm{H}=4.5 \mathrm{~cm}$
$G$ and $H=8 \mathrm{~cm}$
On actual measurement, we find the distances between the do's as under:
Between dots
$A$ and $B=3 \mathrm{~cm}, A$ and $C=3 \mathrm{~cm}, A$ and $D=4.4 \mathrm{~cm}$
A and $\mathrm{E}=3.5 \mathrm{~cm}, \mathrm{~A}$ and $\mathrm{F}=4.6 \mathrm{~cm}, \mathrm{~A}$ and $\mathrm{G}=6.3 \mathrm{~cm}$
$A$ and $H=6 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{C}=5.8 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{D}=4.8 \mathrm{~cm}$
B and $\mathrm{E}=5 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{F}=7.2 \mathrm{~cm}, \mathrm{~B}$ and $\mathrm{G}=3.2 \mathrm{~cm}$
$B$ and $\mathrm{H}=7 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{D}=6.8 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{E}=5.2 \mathrm{~cm}$
C and $\mathrm{F}=2.5 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{G}=7.7 \mathrm{~cm}, \mathrm{C}$ and $\mathrm{H}=5 \mathrm{~cm}$
D and $\mathrm{E}=6.8 \mathrm{~cm}, \mathrm{D}$ and $\mathrm{F}=8.5 \mathrm{~cm}, \mathrm{D}$ and $\mathrm{G}=4.2 \mathrm{~cm}$
D and $\mathrm{H}=8.8 \mathrm{~cm}, \mathrm{E}$ and $\mathrm{F}=4.8 \mathrm{~cm}, \mathrm{E}$ and $\mathrm{G}=4.5 \mathrm{~cm}$
$E$ and $H=2.6 \mathrm{~cm}, F$ and $G=8.5 \mathrm{~cm}, F$ and $H=3.5 \mathrm{~cm}$
$G$ and $H=7.2 \mathrm{~cm}$
We see that are aumst correct.
Page : 13 , Block Name : How Far Apart Are The Dots
Q2 Which two dots do you think are farthest from each other? Check your answer.
Answer. Dots D and H are farthest from each other.
Page : 13 , Block Name : How Far Apart Are The Dots

Q3 Which two dots are nearest to each other? Check your answer.

Answer. Both D and O dots and F and M dots are nearest to each other.

Page : 13 , Block Name : How Far Apart Are The Dots

Q1 Make her right arm 1 cm longer than the left arm.

Answer.


Page : 14 , Block Name : Try This

Q2 Draw a cup 1 cm shorter than this cup.

Answer.


Page : 14 , Block Name : Try This

Q3 Draw a broom half as long as this broom.

Answer.


Page : 14 , Block Name : Try This

Q4 Draw another hair of double the length.

Answer. DIY

Page : 14 , Block Name : Try This

Q1 Do you remember that in Class 3 you measured your height?

Answer. Yes. I remembered that I measured my height when I was in 3rd class.

Page : 15, Block Name : How Tall Have You Grown

Q2 Do you think you have grown taller?

Answer. Yes, I have grown taller.

Page : 15, Block Name : How Tall Have You Grown

Q3 How much? $\qquad$ (cm)

Answer. 5 cm

Page : 15 , Block Name : How Tall Have You Grown

Q4 Have your friends also grown taller? Find out and fill the table below.

Answer. Yes, my friends have grown taller

Page : 15, Block Name : How Tall Have You Grown

Q5 Find out and fill the table below.
Friend's

name \begin{tabular}{c}
Last year's <br>
height (in cm)

 

This year's <br>
height (in cm)

 

How many cm <br>
have they grown?
\end{tabular}

Answer.

| Friends name | Last year's height <br> (in cm ) | This year's height <br> (in cm ) | How many cm have <br> they grown? |
| :---: | :---: | :---: | :---: |
| Mohan | 87 cm | 93 cm | 6 cm |
| Sohan | 90 cm | 95 cm | 5 cm |
| Munna | 1 m | 1 m 3 cm | 3 cm |
| Kalu | 1 m 5 cm | 1 m 8 cm | 3 cm |
| Harish | 95 cm | 1 m | 5 cm |

Page : 15 , Block Name : How Tall Have You Grown

Q1 Could that person pass through the door of your classroom without bending?

Answer. He cannot pass through the door without bending.

Page : 15 , Block Name : Imagine

Q2 Will his head touch the roof of your house if he stands straight?

Answer. Yes, head will touch the roof of my house.

Page : 15, Block Name : Imagine

Q1 Who is the tallest in your family? $\qquad$

Answer. My father is the tallest person in my family.

Page : 15 , Block Name : The Long And Short Of Your Family

Q2 Who is the shortest in your family? $\qquad$

Answer. My brother is the shortest in my family.

Page : 15 , Block Name : The Long And Short Of Your Family

Q3 What is the difference between their heights? $\qquad$

Answer. The difference between their heights is 55 cm .

Page : 15, Block Name : The Long And Short Of Your Family

Qa How far is Rehana from Arundhati? $\qquad$

Answer. Rehan is 4 meter from Arundhati.

Page : 16, Block Name : Race

Qb How far ahead is Rehana from Konkana and Uma? $\qquad$

Answer. Rehana is 8 meter from Konkana and Uma.

Page : 16 , Block Name : Race

Qc How far are Konkana and Uma from the finishing line? $\qquad$

Answer. 15 metres.

Page : 16, Block Name : Race
Qd Have you heard about a 1500 m or 3000 m race? (You remember that 1000 metres make 1 kilometre and 500 metres make half a kilometre.)
So you can say -
In a 1500 metres race people run $\qquad$ km
In a 3000 metres race people run $\qquad$ km.

Answer. a) One and half km.
b) Three km.

Page : 16, Block Name : Race

Qe Have you heard about marathon races in which people have to run about 40 kilometres?
People run marathons on roads because the track of a stadium is only 400 metres.
10 rounds of a stadium track = $\qquad$ km
So, if you run a marathon on a stadium track, you will have to complete $\qquad$ rounds !

Answer. Length of the track of a stadium $=400$ metres
So, 10 of a stadium track $=400 \times 10$ metres
$=4000$ metres
= 4000/1000
$=4 \mathrm{~km}$.

Page : 17 , Block Name : Race

Q1 How long are Gurjeet's and Gopi's jumps?
Answer. Gurjeet's long jump = Dhanu's long jump - 20 cm
$=3 \mathrm{~m} 40 \mathrm{~cm}-20 \mathrm{~cm}$
$=3 \mathrm{~m} \mathrm{20} \mathrm{cm}$
Gopi's long jump = Gurjeet's long jump - 5 cm
$=3 \mathrm{~m} 20 \mathrm{~cm}-5 \mathrm{~cm}$
$=3 \mathrm{~m} 15 \mathrm{~cm}$

Page : 17, Block Name : Long Jump

Q2 Try and see how far you can jump.
Answer. I can throw the ball to a distance 6 meter.

Page : 17, Block Name : Long Jump
Q3 How far can you throw a ball? $\qquad$ metres.

Answer. I can kick a ball to a distance 12 meter.

Page : 17, Block Name : Long Jump
Q4 Look for a big ball, like a football or volleyball. How far can you kick it? $\qquad$
Answer. I can kick a ball to a distance 12 meter.

Page : 17, Block Name : Long Jump

Q1 How many centimetres more should Chandra Pal jump to equal the Men's World Record for high jump?

Answer. High Jump (Men) World Record = 2 m 45 cm
High Jump (Men) Indian Record = 2 m 17 cm
Number of centimeters more required by Chandra Pal to equa
Men's World Record $=2 \mathrm{~m} 45 \mathrm{~cm}-2 \mathrm{~m} 17 \mathrm{~cm}$
$=28 \mathrm{~cm}$.

Page : 18, Block Name : Find Out From The Table

Q2 How many centimetres higher should Bobby A. jump to reach 2 metres?
Remember that $1 \mathrm{~m}=100 \mathrm{~cm}$
Half metre = ?

Answer. High jump Bobby record = 1 m 90 cm
To reach 2 m . $\qquad$
$2 \mathrm{~m}-1 \mathrm{~m} 90 \mathrm{~cm}=10 \mathrm{~cm}$
Also, half a meter $=100 \mathrm{~m} / 2=50 \mathrm{~m}$

Page : 18, Block Name : Find Out From The Table

Q3 Galina's long jump is nearly
a) 7 metres
b) 7 and a half metres
c) 8 metres

Answer. About 8 meters.

Page : 18 , Block Name : Find Out From The Table

Q4 Look at the Women's World Records. What is the difference between the longest jump and the highest jump?

Answer. The difference between the highest jump and the longest jump= $7 \mathrm{~m} 52 \mathrm{~cm}-2 \mathrm{~m} 9 \mathrm{~cm}=5$ m 43 cm

Page : 18 , Block Name : Find Out From The Table
Q5 If Mike P. could jump $\qquad$ centimetres longer, his jump would be full 9 metres.

Answer. If mika jumps 5 cm longer than his jump would be full 9 m .
Page : 18 , Block Name : Find Out From The Table
Q6 Whose high jump is very close to two and half metres?
a) Stefka K.
b) Chandra Pal
c) Javier S.
d) Bobby A.

## Answer. Chandra Pal

Page : 18, Block Name : Find Out From The Table
Q1 The doctor has told Devi Prasad to run 2 km every day to stay fit. He took one round of this field. How far did he run?

Answer.


Page : 19, Block Name : Running Exercise

Q2 The field was very far from his home. So he chose a park nearby. The boundary of the park was about 400 metres long. How many rounds of the park must Devi Prasad run to complete 2 km ?

Answer. Total length of the boundary of part $=400 \mathrm{~m}$
Number of rounds needed to complete $=2000 / 400=5$

Page : 19, Block Name : Running Exercise

Q3 One day the weather was very good and a cool breeze was blowing. He felt so good that he kept jogging till he got tired after 8 rounds. That day he ran $\qquad$ km and $\qquad$ metres!

Answer. Total distance covered in 1 round $=400 \mathrm{~m}$
Distance covered in 8 rounds $=800 \times 4=3200 \mathrm{~m}$
$=3000 \mathrm{~m}+200 \mathrm{~m}$
$=3 \mathrm{~km} \mathrm{200} \mathrm{cm}$

Page : 19, Block Name : Running Exercise

Q1 The Qutab Minar is 72 metres high. About how many metres high is your classroom?

Answer. The classroom is about 4 meters high.

Page : 19 , Block Name : How Many Rooms High

Q2 Guess how many rooms, one on top of the other, will be equal to the Qutab Minar. Explain how you made a guess.

Answer. Height of the Qutub Minar $=72 \mathrm{~m}$
No. of room $=72+4=18$

Page : 19, Block Name : How Many Rooms High

Q1 How far is Kozhikode from Thalassery?

Answer. The distance of Kozhikode from Thalassery $=24+46=70 \mathrm{~cm}$

Page : 20 , Block Name : From Kozhikode To Thalassery

Q1 How much does Momun walk every day to reach school? Is it more than 1 km ?

Answer. Distance walked by Momun to go school $=400+150+350+40=940 \mathrm{~m}$ Hence, it is not more than 1 km .

Page : 20 , Block Name : From Kozhikode To Thalassery
Q2 Find out how far your friends live from school and fill the table. Write in metres or kilometres.


Who among you lives nearest to the school? $\qquad$
Who lives farthest from the school? $\qquad$


How many children live less than 1 kilometre away from your school? $\qquad$
Is there anyone who lives more than 5 km away from the school?
How do they come to school? $\qquad$

Answer.

| Name of friends | Distance of home from school |
| :---: | :---: |
| Guddu | 3 km 400 m |
| Mahesh | 500 m |
| Savitri | 900 m |
| John | $2 \mathrm{~km} \mathrm{300m}$ |
| Ahmad | 400 m |

From the table
Ahmad lives nearest to the school.
Guddu is farthest from the school.
Mahesh, Savitri, and Ahmed live less than 1 km .
They come to school by rickshaw.

Page : 21, Block Name : From Kozhikode To Thalassery
Q1 How long is the thread in a reel?

Answer. The length of the thread in a reel depends on its size. It may be 100 meters, 150 meters, 200 meters, etc.

Page : 21 , Block Name: Guess And Find Out

Q2 How long is the string of a kite reel? Can it be more than a kilometre long?

Answer. The length of the string of a kite reel depends upon its size. It may be 400 meters, 900 meters, etc. Yes, it can be more than kilometer in length.

## Page : 21 , Block Name : Guess And Find Out

Q3 If a handkerchief is made out of a single thread, how long would that thread be?

Answer. The length of the thread can be $400 \mathrm{~m}, 500 \mathrm{~m}$ or more.
Page : 21 , Block Name : Guess And Find Out
Q1 Which is the highest building that you have seen? About how many rooms high was it?

Answer. Qutab Minar is the highest building that I have seen. It is about 26 rooms high.
Page : 22 , Block Name : Try To Find Out

Q2 How high can a kite go? Can it go higher than the Qutab Minar?

Answer. A kite can go to the height of about 30 meters. It cannot go higher than the Qutab Minar.
Page : 22 , Block Name : Try To Find Out
Q3 How high can a plane fly? Can it fly higher than Mount Everest which is about 9 km high?

Answer. A plate can fly to the height of 5000 metres. It cannot fly higher than the Mount Everest.

Page : 22 , Block Name : Try To Find Out

Q4 Have you ever seen clouds below you?

Answer. No, I have not seen clouds below me.

Page : 22 , Block Name : Try To Find Out

