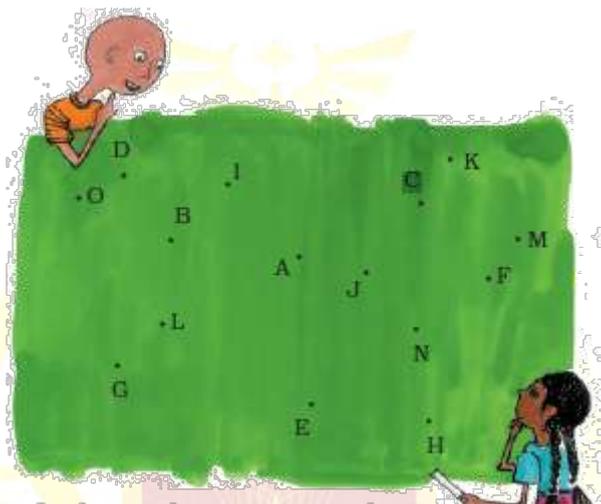


Long and Short

Question 1:

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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:

Do by yourself as directed. Consider any two points and observe the distance between them. Then use a ruler to measure the distance those points. Check if your guess matches with the measured distance.

Question 2:

Which two dots do you think are the farthest from each other? Check your answer.

Answer:

In the given picture it can be observed that the distance between dots M and O is the greatest. Use a ruler to measure the distances and verify the answer.

Question 3:

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

Answer:

In the given picture it can be observed that the distance between dots D and O is the smallest. Use a ruler to measure the distances and verify the answer.

Question 4:

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Look at the picture and explain how Birbal made Akbar's line shorter.



Answer:

To make a line shorter without erasing it, you can draw a longer line. Birbal did the same. He drew a line longer than the Akbar's line to make Akbar's line shorter.

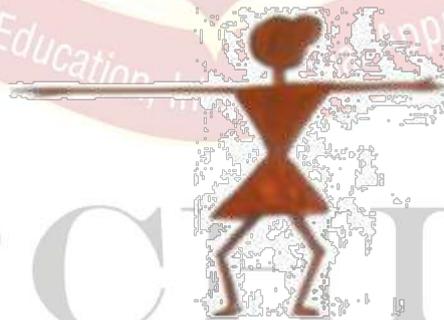
Question 5:

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



Answer:

Take a ruler and measure the left arm. Draw a right arm same as the left arm and then increase the length by 1 cm.



Question 6:

Draw a cup 1 cm shorter than this cup.



Answer:

Take a ruler and measure the height of the cup. Draw a similar cup but its height should be 1 cm less than the given cup.



Question 7:

Draw a broom half as long as this broom.



Answer:

Measure the length of the given broom. Draw a similar broom but its length should be half of the length of the given broom.



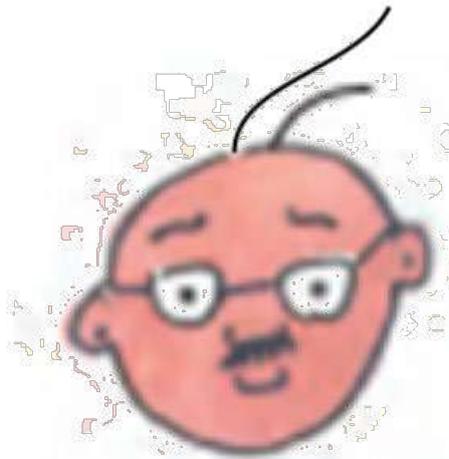
Question 8:

Draw another hair of double the length.



Answer:

Observe the length of the hair in the given picture. Draw another hair with twice as length of given hair.



Question 9:

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Do you remember that in Class 3 you measured your height? Do you think you have grown taller? How much?

Answer:

Try to remember your height when you were in Class 3. Measure your present height. If your present height is more than your height in class 3 then you have grown taller.

Subtract your height in class 3 from your present height to see how much taller you have become.

Question 10:

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

Friend's name	Last year's height (in cm)	This year's height (in cm)	How many cm have they grown?

Answer:

Ask your friends what was their height when they were in class 3. Measure their present height and subtract it from the last year's height to fill the table.

Question 11:

Jhumpa once read a list of the tallest people in the world. One of them was 272 cm tall! That is just double of Jhumpa's height. How tall is Jhumpa? _____ cm.

Answer:

The height of one of the tallest people is 272 cm. Jhumpa's height is equal to half of 272 cm.

Divide 272 by 2 to get Jhumpa's height.

$$272 \div 2 = 136$$

Therefore, Jhumpa's height is 136 cm.

Question 12:

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

Answer:

Measure the height of the classroom's door. If the height of the door is more than 272 cm, then the person can easily pass through the door but if it is less than 272 cm, the person needs to bend to pass the door.

Question 13:

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

Answer:

Measure the height your roof. If the height is more than 272 cm, the person's head will not touch the roof. If it is less than 272 cm, his head will touch the roof.

Question 14:

Who is the tallest in your family? _____

Who is the shortest in your family? _____

What is the difference between their heights? _____

Answer:

Observe the height of your family members and answer the question by yourself.

Question 15:

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Look at the picture below.



To answer the question below choose from the distances

- 3 metres
- 6 metres
- 10 metres

- 15 metres

How far is Rehana from the Arundhati?

Answer:

From the given picture it can be observed that the distance between Rehana and Arundhati is about half the distance of Arundhati from the finishing line.

Divide 6 by 2 to get the distance of Rehana from Arundhati.

$$6 \div 2 = 3$$

Therefore, Rehana is 3 meters far from Arundhati.

Question 16:

How far ahead is Rehana from Konkana and Uma?

Answer:

From the given picture it can be observed that the distance of Rehana from Konkana and Uma is about two times the distance of Rehana from Arundhati.

Multiply 3 meters by 2 to get the distance of Rehana from Konkana and Uma.

$$3 \times 2 = 6$$

Therefore, Rehana is approximately 6 m ahead from Konkana and Uma.

Question 17:

How far are Konkana and Uma from the finishing line?

Answer:

The distance of Konkana and Uma from the finishing line is equal to the sum of the distance of Rehana from Konkana and Uma, the distance of Rehana from Arundhati, and the distance of Arundhati from the finishing line.

Therefore, add 6, 3, and 6 to get the distance of Konkana and Uma from the finishing line.

$$6 + 3 + 6 = 15$$

Hence, Konkana and Uma are 15 m far from the finishing line.

Question 18:

So you can say _____

In a 1500 metres race people run _____ km.

Answer:

There are 1000 metres in 1 kilometre. So, there will be 500 metres in half a kilometre.

Therefore, in a 1500 metres race people need to run 1 and a half km.

Question 19:

In a 3000 metres race people run _____ km.

Answer:

There are 1000 metres in 1 kilometre. Divide 3000 by 1000 to convert 3000 metres to kilometres.

$$3000 \div 1000 = 3 \text{ km}$$

Therefore, in a 3000 metres race people need to run 3 km.

Question 20:

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10 rounds of a stadium track = _____ km

Answer:

Step 1: The track of a stadium is 400 metres. Multiply 400 by 10 to obtain the distance covered in 10 rounds of a stadium track in metres.

$$400 \times 10 = 4000 \text{ m}$$

Step 2: 1000 metres is equal to 1 kilometre. Divide 4000 by 1000 to convert 4000 metres to kilometres.

$$4000 \div 1000 = 4 \text{ km}$$

Therefore, 10 rounds of a stadium track = 4 km

Question 21:

So, if you run a marathon on a stadium track, you will have to complete _____ rounds!

Answer:

Step 1: The total distance to run in a marathon race is 40 km. Multiply 40 by 1000 to convert 40 km to metres.

$$40 \times 1000 = 40000 \text{ km}$$

Step 2: The distance covered in 1 round of stadium track is 400 m. Divide 40000 by 400 to get the number of rounds required to complete a marathon.

$$40000 \div 400 = 100$$

Therefore, you will have to complete 100 rounds.

Question 22:

Dhanu has the longest jump of 3 metres 40 cm. Gurjeet is second. His jump is 20 cm less than Dhanu's. Gopi comes third. His jump is only 5 cm less than Gurjeet's jump.

How long are Gurjeet's and Gopi's jumps?

Answer:

Step 1: Dhanu's jump is 3 metres 40 cm.

Since Gurjeet jumps 20 cm less than Dhanu, subtract 20 cm from 3 metres 40 cm to get the length of Gurjeet's jump.

$$(3 \text{ metres } 40 \text{ cm}) - 20 \text{ cm} = 3 \text{ metres } 20 \text{ cm}$$

Step 2: Since Gopi jumps 5 cm less than Gurjeet, subtract 5 cm from 3 metres 20 cm to get the length of Gopi's jump.

$$(3 \text{ metres } 20 \text{ cm}) - 5 \text{ cm} = 3 \text{ metres } 15 \text{ cm}$$

Therefore, Gurjeet's jump is 3 m 20 cm long and Gopi's jump is 3 m 15 cm long.

Question 23:

Try and see how far you can jump.

Answer:

Jump as high as you can and record the length of your jump.

Question 24:

How far can you throw a ball? _____ metres.

Answer:

Take a ball and throw it. Record the maximum distance covered by the ball. Write your answer in meters.

Question 25:

Look for a big ball, like a football or volleyball. How far can you kick it?

Answer:

Kick a ball like the way you play football. Record the distance covered by the ball.

Question 26:

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Here are the Indian Records and World Records for some jumps.

<i>Sports</i>	<i>World Record</i>	<i>Indian Record</i>
High Jump (Men)	Javier S. (2m 45 cm)	Chandra Pal (2m 17 cm)
Long Jump (Men)	Mike P. (8m 95 cm)	Amrit Pal (8m 8 cm)
High Jump (Women)	Stefka K. (2m 9 cm)	Bobby A. (1m 91 cm)
Long Jump (Women)	Galina C. (7m 52 cm)	Anju G. (6m 83 cm)

Find out from the table:

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

Answer:

The Men's World Record for high jump is 2m 45 cm. The length of Chandra Pal high jump is 2m 17 cm. Subtract 2m 17 cm from 2m 45cm to get the answer.

$$(2\text{m } 45\text{cm}) - (2\text{m } 17\text{cm}) = 28\text{ cm}$$

Therefore, he should jump 28 cm more.

Question 27:

How many centimetres higher should Bobby A. jump to reach 2 metres?

Answer:

Step 1: The length of Bobby A. jump is 1 m 91 cm. We know,

100 cm = 1 m. Therefore, the length of Bobby A.'s jump is:

$$100 \text{ cm} + 91 \text{ cm} = 191 \text{ cm.}$$

Step 2: Multiply 100 by 2 to convert 2m to centimetres.

$$100 \times 2 = 200$$

Step 3: Subtract 191 from 200 to get the answer.

$$200 - 191 = 9$$

Therefore, Bobby A.'s jump should be 9cm higher to reach 2m.

We know, 1m = 100 cm. Therefore, half metre = 50cm.

Question 28:

Galina's long jump is nearly

- a) 7 metres
- b) 7 and a half metres
- c) 8 metres

Answer:

The length of Galina's long jump is 7 m 52 cm. Half meter is equal to 50 cm. Therefore, Galina's jump is nearly 7 and a half metres.

Hence, the option b is the correct answer.

Question 29:

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

Answer:

Women's World Record for longest jump is 7m 52 cm and for highest jump is 2m 9 cm.

Subtract 2m 9 cm from 7m 52 cm to obtain the difference.

$$(7\text{m } 52\text{ cm}) - (2\text{m } 9\text{ cm}) = 5\text{m } 43\text{ cm}$$

The difference between the longest and the highest jump is 5m 43 cm.

Question 30:

If Mike P. could jump _____ centimetres longer, his jump would be full 9 metres?

Answer:

The length of Mike P. jump is 8m 95 cm. We know 1m = 100 cm. Subtract 95 cm from 100 cm to obtain the difference.

$$100\text{ cm} - 95\text{ cm} = 5\text{ cm}$$

Therefore, if he could jump 5 cm longer, his jump would be full 9 metres.

Question 31:

Whose high jump is very close to two and half metres?

- a) Stefka K.
- b) Chandra Pal
- c) Javier S.
- d) Bobby A.

Answer:

Observe the record given in the table. The length of Javier S. jump is 2m 45 cm.

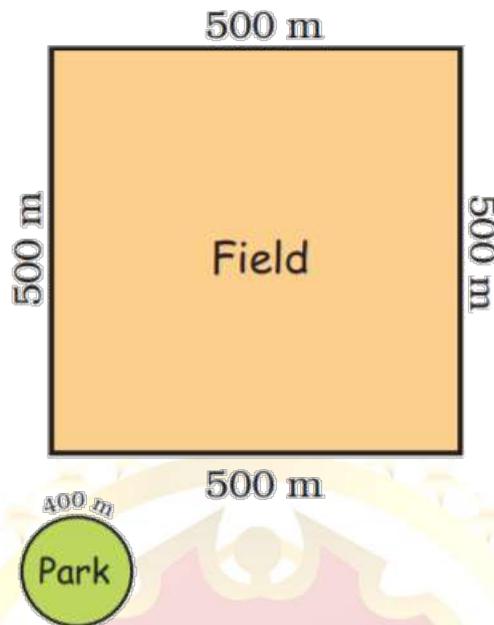
Half metre is equal to 50 cm. Therefore, his jump is approximately two and a half metres.

Hence, the option c) is the correct answer.

Question 32:

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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:

Step 1: Add 500 m four times to obtain the distance covered in one round.

$$500 \text{ m} + 500 \text{ m} + 500 \text{ m} + 500 \text{ m} = 2000 \text{ m.}$$

Step 2: We know, 1 km = 1000 m. Divide 2000 by 1000 to convert 2000 m to kilometres.

$$2000 \div 1000 = 2$$

Therefore, he ran 2 km in one round.

Question 33:

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:

Step 1: Multiply 2 by 1000 to convert 2 km to metres.

$$2 \times 1000 = 2000 \text{ m}$$

Step 2: The distance covered in one round is 400 m. Divide 2000 by 400 to get the answer.

$$2000 \div 400 = 5$$

Therefore, he has to run 5 rounds of the park to complete 2 km.

Question 34:

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 _____ km and _____ metres!

Answer:

Step 1: Distance covered in one round is 400m. Multiply 400 by 8 to obtain the distance covered in 8 rounds.

$$400 \times 8 = 3200\text{m}$$

Step 2: Distance covered in 8 rounds is 3200m that is 3000m + 200m. We know 1000m = 1 km. Divide 3000 by 1000 to convert 3000m to kilometres.

$$3000 \div 1000 = 3 \text{ km}$$

Therefore, he ran 3 km and 200m.

Question 35:

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

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

Answer:

Measure the height of your classroom in metres and then divide 72 by the obtained height to get the number of rooms required.

Question 36:

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Subodh is going to Kozhikode which is 24 kilometres (km) away. Manjani is going to Thalassery which is 46 km away in the opposite direction.

How far is Kozhikode from Thalassery?

Answer:

Add 24 and 46 to obtain the distance between Kozhikode and Thalassery.

$$24 + 46 = 70 \text{ km}$$

Therefore, Kozhikode is 70 km far from Thalassery.

Question 37:

Momun comes to school from very far. He first walks about 400 metres to the pond. With slippers in his hands, he then walks 150 metres through the pond. Next he runs across the 350 metres wide green field. Then he carefully crosses the 40 metres wide road to reach his school.

How much does Momun walk every day to reach school?

Answer:

Add all the distances that is covered by Momun to get the total distance he walks to reach school.

$$400 + 150 + 350 + 40 = 940\text{m}$$

Therefore, he walks 940 m every day to reach school.

Question 38:

Is it more than 1 km?

Answer:

Momun walked 940m every day. We know $1000\text{m} = 1\text{ km}$, 940 m is less than 1000 m. Therefore, it is less than 1 km.

Question 39:

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Find out how far your friends live from school and fill the table.

Write in metres or kilometres.

Friend's name	Distance of home from school

Who among you lives nearest to the school?

Who lives farthest from the school?

How many children live less than 1 kilometre away from your school?

Is there anyone who lives more than 5 km away from school?

How do they come to school?

Answer:

Select your friends and ask them the distance from their home to the school and fill it in the table. Then observe the data of the table to answer the remaining questions.

Question 40:

How long is the thread in a reel?

Answer:

The length of the tread depends upon the thickness of the reel. In general, the length can be 100m, 200 m, or even 500m.

Question 41:

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

Answer:

The string of a kite reel depends upon the size of the kite. It can be 500m or 900m. Yes, it can be more than a kilometre long as well.

Question 42:

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

Answer:

If a handkerchief is made out of a single thread, then the length of the thread required depends upon the size of the handkerchief. In general, the length of the thread is approximately 4000 m.

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Question 43:

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Which is the highest building that you have ever seen? About how many rooms high was it?

Answer:

Recollect all the buildings that you have seen and write the name of the highest building. Compare the height of the highest building to the height of your room.

Question 44:

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

Answer:

In general, the kite can go up to the height of 40 to 50 metres. The height of Qutab Minar is 72 metres. Therefore, the kite cannot fly higher than the Qutub Minar.

Question 45:

How high can a plane fly? Can it fly higher than Mount Everest which is about 9 km high?

Answer:

In general, a plane can fly up to the height of 13 km. Yes, a plane can fly higher than the Mount Everest.

Question 46:

Have you ever seen clouds below you?

Answer:

Think where you can see clouds. Is it above or below you?



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