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The Shorter Line

Akbar was a famous king. He had a smart minister called Birbal. Once Akbar gave him a difficult question. He drew a line on the floor.



Question: 1

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

Answer: Birbal drew a longer line than the line drawn by the Akbar.

Question: 2

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



Answer:

Question: 3

Draw a cup 1 cm shorter than this cup.



Answer: The cup drawn is 1 cm shorter than the given cup



Question: 4

Draw a broom half as long as this broom.



Answer: A broom half of the size of broom given in figure is drawn below



Question: 5

Draw another hair of double the length.



Answer: Hair of double length is drawn below



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How Tall Have You Grown?

Question: 6

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

Answer: Yes, I measured my height in Class 3

Question: 7

Do you think you have grown taller?

Answer: Yes, I have grown taller

Question: 8

How much?

Answer: About 5 cm

Question: 9

Have your friends also grown taller?

Answer: Yes, most of them have grown taller

Question: 10

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: Height of the tallest person = 272 cm

Which is double than Jhumpa's height

So,

$$272 \div 2 = 136 \text{ cm}$$

Hence, Jhumpa's height is 136 cm

Question: 11

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

Answer: Since, the door of the classroom is 230 cm high. So, the person cannot pass through it without bending.

Question: 12

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

Answer: Yes, because the height of my classroom is 310 cm

The Long and Short of Your Family!

Question: 13

Who is the tallest in your family?

Answer: My father is the tallest in my family. His height is 174 cm

Question: 14

Who is the shortest in your family?

Answer: My brother is the shortest in my family. His height is 93 cm

Question: 15

What is the difference between their heights?

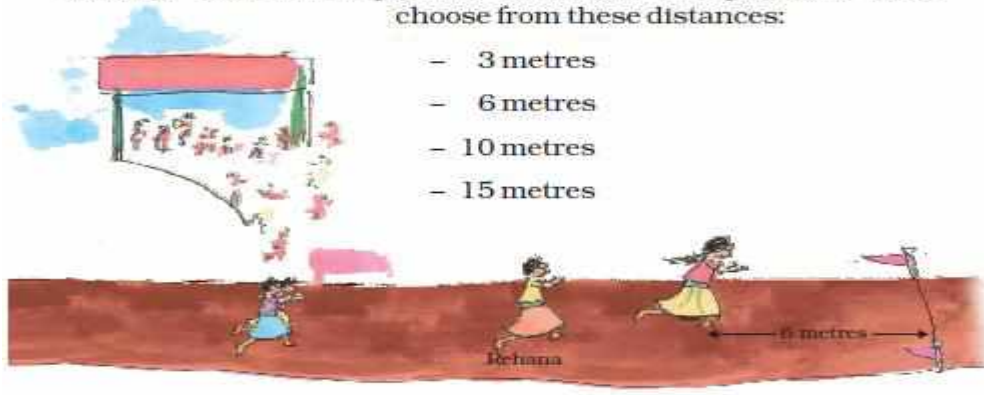
Answer: The difference between their heights is 81 cm

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Race

This is a 100 metre race for girls. Arundhati is nearest the finishing line. She is about 6 metres from it.

Behind her is Rehana. Konkana and Uma are running behind Rehana. Look at the picture. To answer the questions below choose from these distances:



Question: 16

(a) How far is Rehana from Arundhati?

Answer: The distance of Rehana from Arundhati is 3 metres.

(b) How far ahead is Rehana from Konkana and Uma?

Answer: Rehana is 6 metres ahead from Konkana and Uma

(c) How far are Konkana and Uma from the finishing line?

Answer: Konkana and Uma are 15 metres far from the finishing line

Question: 17

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.)

(a) In a 1500 metres race people run _____ km

Answer: In a 1500 metres race people run one and half km

(b) In a 3000 metres race people run _____ km

Answer: In a 3000 metres race people run 3 km

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Question: 18

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.

(a) 10 rounds of a stadium track = _____ km

Answer: 10 rounds of a stadium track = 400 metres \times 10

= 4000 metres

= 400 \div 100

= 4 km

So, 10 rounds of a stadium track = 4 km

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

Answer: The number of rounds to be completed

$$= (40 \times 100) \div 100$$

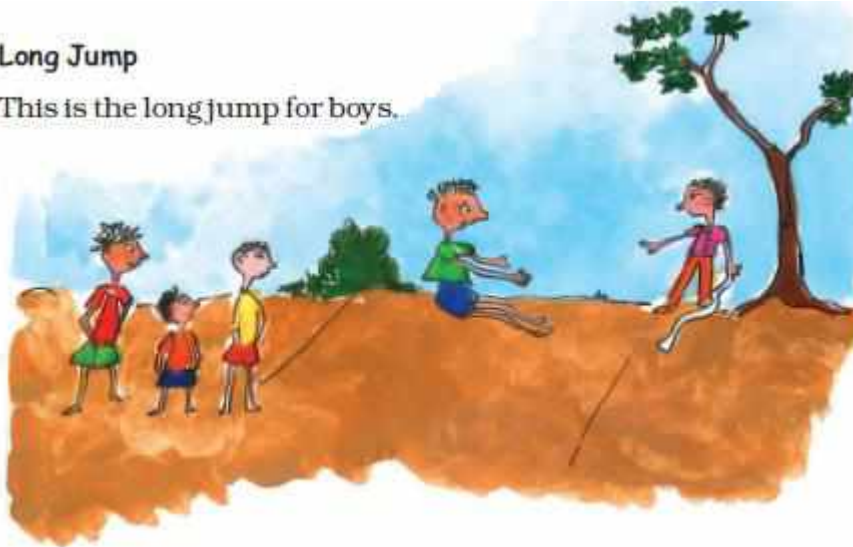
$$= 4000 \div 100$$

$$= 10$$

Hence, you have to complete 10 rounds on a stadium track

Long Jump

This is the long jump for boys.



Question: 19

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: Gurjeet's jumps = Dhanu's jump – 20 cm

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

$$= 3 \text{ metres } 20 \text{ cm}$$

Therefore, Gurjeet's jump is 3 metres 20 cm

Gopi's jump = Gurjeet's jumps – 5 cm

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

$$= 3 \text{ metres } 15 \text{ cm}$$

Therefore, Gopi's jump is 3 metres 15 cm

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

Sports	World Record	Indian Record
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)	Galtina C. (7m 52 cm)	Anju G. (6m 83 cm)

Question: 20

Find out from the table

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

Answer: We know that,

$$1 \text{ m} = 100 \text{ cm}$$

Given

$$\text{Men's world record for high jump} = 2 \text{ m } 45 \text{ cm}$$

$$= 2 \times 100 + 45 \text{ cm}$$

$$= 200 \text{ cm} + 45 \text{ cm}$$

$$= 245 \text{ cm}$$

$$\text{High jump record of Chandra Pal} = 2 \text{ m } 17 \text{ cm}$$

$$= 2 \times 100 + 17 \text{ cm}$$

$$= 200 \text{ cm} + 17 \text{ cm}$$

$$= 217 \text{ cm}$$

Now, subtract 217 from 245, we get

$$245 - 217 = 28 \text{ cm}$$

Hence, to equal the men's world record for high jump, Chandra Pal need to jump 28 cm more.

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

Remember that 1 m = 100 cm

Half metre =?

Answer: Bobby A, high jump record = 1 m 91 cm

$$= 1 \times 100 + 91 \text{ cm}$$

$$= 191 \text{ cm}$$

Required centimetres to reach is 2m

So,

$$= 2 \times 100$$

$$= 200 \text{ cm}$$

Thus,

$$200 - 191 = 9 \text{ cm}$$

Therefore, Bobby A should jump 9 cm higher to reach 2 metres

3. Galina's long jump is nearly

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

Answer: Galina's long jump record is 7 m 52 cm

Hence, it is nearly 7 and half metres,

Therefore option (b) is correct

4. 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 high jump = 2 m 9 cm

Women's World record for long jump = 7 m 52 cm

So, difference between them is

$$= 7 \text{ m } 52 \text{ cm} - 2 \text{ m } 9 \text{ cm}$$

$$= 5 \text{ m } 43 \text{ cm}$$

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

Answer: Mike P long jump record = 8 m 95 cm

To reach 9 metres = 9 m – 8 m 95 cm

$$= 5 \text{ cm}$$

Therefore, if Mike P jump 5 cm longer, his jump would be full 9 metres

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

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

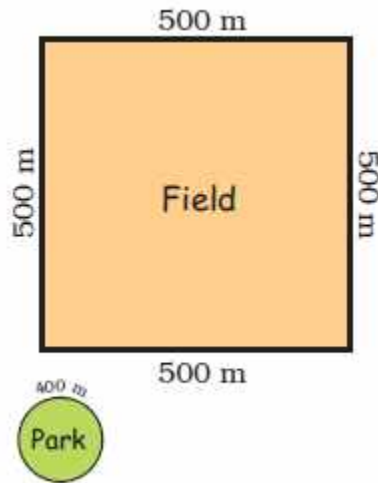
Answer: Javier S high jump is 2 m 45 cm. So, his jump is very close to two and half metres.

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Running Exercise

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?

The field was very far from his home. So he chose a park nearby. The boundary of the park was about 400 metres long.



Question: 21

* **How many rounds of the park must Devi Prasad run to complete 2 km?**

Answer: We know that,

$$1 \text{ km} = 1000 \text{ m}$$

So,

$$2 \text{ km} = 2000 \text{ m}$$

Hence, to complete 2000 m, Devi Prasad must complete

$$= 2000 \text{ m} \div 400 \text{ m}$$

$$= 5 \text{ rounds}$$

Therefore, Devi Prasad has to complete 5 rounds of the park

* **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: Distance covered to complete one round of the park = 400 m

So, distance covered by Devi Prasad to complete 8 rounds of the park = $400 \text{ m} \times 8$

$$= 3200 \text{ m}$$

We know,

$$1000 \text{ m} = 1 \text{ km}$$

$$\text{Therefore, } 3200 \text{ m} = 3000 \text{ m} + 200 \text{ m}$$

$$3000 \text{ m} = 3000 \div 1000$$

$$= 3 \text{ km } 200 \text{ m}$$

Hence, Devi Prasad ran 3 km 200 m to complete 8 rounds of the park

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From Kozhikode to Thalassery

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.



Question: 22

How far is Kozhikode from Thalassery? _____

Answer: Kozhikode distance from Thalassery
 = Kozhikode distance + Thalassery distance
 = 24 km + 46 km
 = 70 km

How Far is Your Home from School?

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.



Question: 23

***How much does Momun walk every day to reach school? _____**

Answer: Total distance of school from Momun home = 400 m + 150 m + 350 m + 40 m
 = 940 m

Therefore, Momun has to walk 940 m every day to reach school

*** Is it more than 1 km? _____**

Answer: Since, 940 m is less than 1000 m
 Therefore, it is not more than 1 km

Question: 24

Find out how far your friends live from school and fill the table. Write in metres or kilometres.

<i>Friend's name</i>	<i>Distance of home from school</i>

Answer: Following are the list of distance of school from their home

Friends Name	Distance of home from school
Sohail	500 m
Amit	2 km 100 m
Alok	1 km 400 m
Sanjeev	1 km 100 m
Rohit	5 km 400 m
Rahul	2 km 400 m

*** Who among you lives nearest to the school?**

Answer: A person who lives nearest to the school is Sohail

*** Who lives farthest from the school?**

Answer: A person who lives farthest from the school is Rohit

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

Answer: Me and Sohail. That means total two children lives less than 1 km away from school

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

Answer: Yes, Rohit lives more than 5 km away from the school

* **How do they come to school?**

Answer: They come to the school by school bus.

Guess and Find Out

Question: 25

How long is the thread in a reel?

Answer: The length of thread can be measured depending on the thickness of reel. It may be 60 metres, 90 metres, 100 metres or 400 metres or more

Question: 26

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

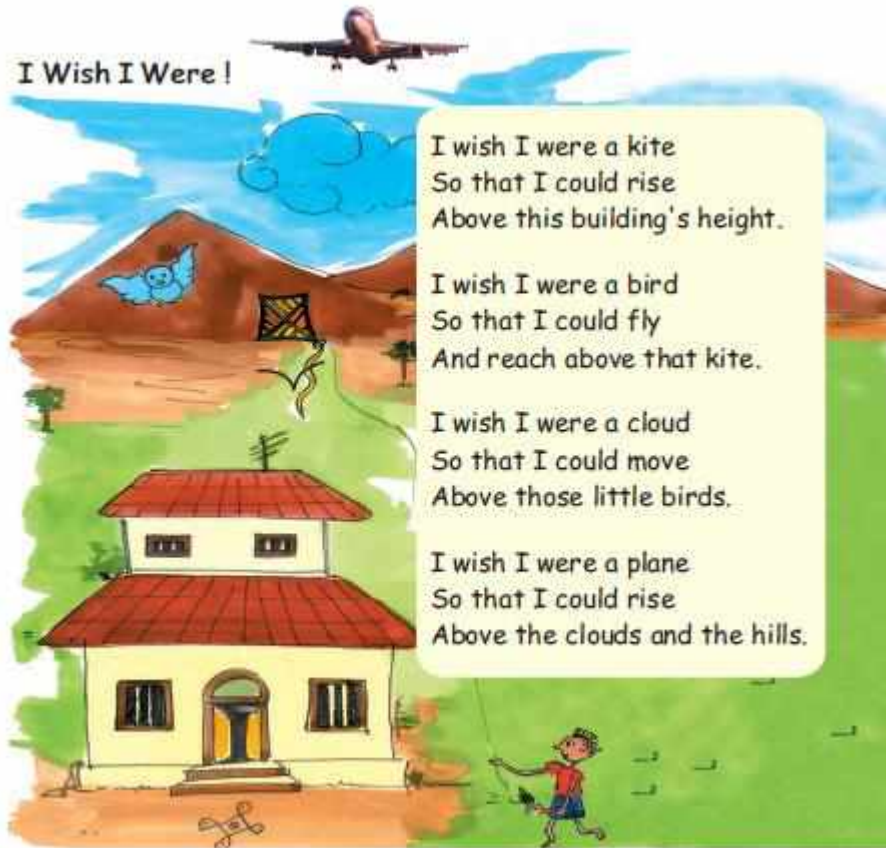
Answer: A kite reel can be more than a kilometre long. It may be 500 metres, 900 metres, 1000 metres long.

Question: 27

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

Answer: The length of thread may be about 4000 metres, if a handkerchief is made out of a single thread.

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Try to find out:

Question: 28

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

Answer: The highest building that I saw is Qutub Minar. It is about 25 rooms high

Question: 29

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

Answer: Yes, a kite can go higher than the Qutub Minar. It may go about 100 metres high.

Question: 30

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

Answer: A plane can fly more than 10000 metres high. Yes, it can fly higher than the Mount Everest which is about 9 km high.