

# DATA HANDLING



# Types of Graphs

## DATA

Data is a collection of information. This collection can be in the form of numbers, words, symbols or diagrams.

## PICTOGRAPHS

Pictographs represent data in a pictorial form. Each picture represents certain number of objects. The pictures are repeated as many times according to the value of data. If only a portion of picture is drawn, it shows a fraction of the number of objects.

## BAR GRAPHS

A bar graph is a type of chart that uses rectangular bars to show value of data. They can be horizontal or vertical. The values on each axis can be numbers or words. The height of each bar will represent the value it can take. Bar graphs are useful for comparison of data.

## PIE CHARTS

Also known as Circle graphs, pie charts use parts of circles in shapes of 'pie slices' (known as sectors) to represent data. These sectors represent parts of a whole. The size of the sectors depends on what part of the complete data set do they take. Pie charts are used to show relative data or data in proportion.

# DO YOUR CHORES!



Use the chart to answer the questions.

CHORES	SAM	SALLY	PETER
DO LAUNDRY	2	2	1
WASH DISHES	8	10	6
TAKE OUT GARBAGE	2	1	3
WATER PLANTS	3	4	0
DUST/VACUUM	4	1	2
CLEAN ROOM	2	3	4
RAKE/MOW LAWN	1	0	2

Sam, Sally and Peter are three friends. Every time each one completes a chore, he or she gets a star. The chart shows the number of stars each one has collected so far.

How many stars does Sam have in all? \_\_\_\_\_

How many stars does Sally have in all? \_\_\_\_\_

How many stars does Peter have in all? \_\_\_\_\_

Which chore has been performed the most times? \_\_\_\_\_

Which chore has been performed the fewest times? \_\_\_\_\_

Who has collected the most stars washing dishes? \_\_\_\_\_

Who has collected the fewest stars doing laundry? \_\_\_\_\_



# CARROTS FOR BUNNIES READING A PICTOGRAPH

Your friends feed carrots to their pet bunnies. Find out how many carrots they gave to their pets and answer the questions below. Note: each carrot in the pictograph stands for 2 carrots fed.

Owner	Number of Carrots
Luke	
Harry	
Joe	

## Questions:



1. How many carrots did Luke feed his bunny?

Answer: \_\_\_\_\_

2. How many carrots did Harry feed his bunny?

Answer: \_\_\_\_\_

3. Who fed the most carrots?

Answer: \_\_\_\_\_

4. Who fed 12 carrots?

Answer: \_\_\_\_\_

5. Who fed more carrots, Luke or Joe?

Answer: \_\_\_\_\_

# TAXI COMPANY: READING A PICTOGRAPH

These two pictographs compare the miles two taxis traveled in a month. Answer the questions below using information from the pictographs.  
Note: each taxi in the pictograph stands for 150 kilometers.



Polaa	
Week	Number of Kilometers
Week 1	
Week 2	
Week 3	
Week 4	

Pubber	
Week	Number of Kilometers
Week 1	
Week 2	
Week 3	
Week 4	



## Questions:

1. How many kilometers did Polaa travel in total?

Answer: \_\_\_\_\_

2. How many kilometers did Pubber travel in total?

Answer: \_\_\_\_\_

3. Which taxi went more kilometers in total?

Answer: \_\_\_\_\_

4. How many kilometers did the two taxis go in total?

Answer: \_\_\_\_\_

5. If Polaa traveled 300 more kilometers, what would be the difference in total from Pubber?

Answer: \_\_\_\_\_



# MOVIE GOER! READING A PICTOGRAPH

The theater recorded the numbers of audience members who attended this movie. Read the pictograph and answer the questions below. Note: each symbol in the pictograph stands for 100 persons.

Day	Number of Audience Members
Monday	5
Tuesday	8
Wednesday	10
Thursday	11
Friday	

= 100 persons

## Questions:

1. How many audience members does this symbol represent?

Answer: \_\_\_\_\_

2. On what day did the theater have the fewest audience members?

Answer: \_\_\_\_\_

3. How many audience members attended the theater from Tuesday to Thursday?

Answer: \_\_\_\_\_

4. How many more audience members did they need on Wednesday to be equal to those on Thursday?

Answer: \_\_\_\_\_

5. If the entrance fee is ₹50 per person, how much did the theater earn on Tuesday?

Answer: \_\_\_\_\_

# BUILDING A NEW TOWN: READING A PICTOGRAPH



Building a new town takes a lot of time. See the construction progress in the pictograph. Answer the questions below. Note: each house in the pictograph stands for 20 houses.

Month and Year	Number of houses built
January 2009	
April 2009	
August 2009	
December 2009	
March 2010	

= 20 houses

## Questions:

1. How many houses does this symbol represent?

Answer: \_\_\_\_\_

2. In what month did they build more than 100 houses?

Answer: \_\_\_\_\_

3. How many houses were built from January 2009 to August 2009?

Answer: \_\_\_\_\_

4. How many more houses need to be built in April 2009 to be equal to those in December 2009?

Answer: \_\_\_\_\_

5. The town needs to build 200 houses in March. Draw the symbols in the chart needed to equal 200 houses.

# COLLECTING DATA SETS

Collecting data is an important part of math and science. For practice, let's use the home or classroom as an investigative environment. Fill in the chart below by counting up the items that you see in your home or classroom.

desks								
books								
windows								
chairs								
lamps								
pictures on walls								
shelves								
	1	2	3	4	5	6	7	8
								9

The data collection process is more than just counting. For example, the set of desks in a classroom will likely include a large number of student desks, but it will also include the teacher's desk and maybe other desks or tables.

How do you record the teacher's desk? It's not a "student" desk, but it still belongs in the set of desks. How do you record the difference?

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In the set of shelves, other choices will have to be made. What if some of your shelves are attached to the walls, and some are not? They all belong in the set of shelves, but how will you record the difference?

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# READING A BAR GRAPH

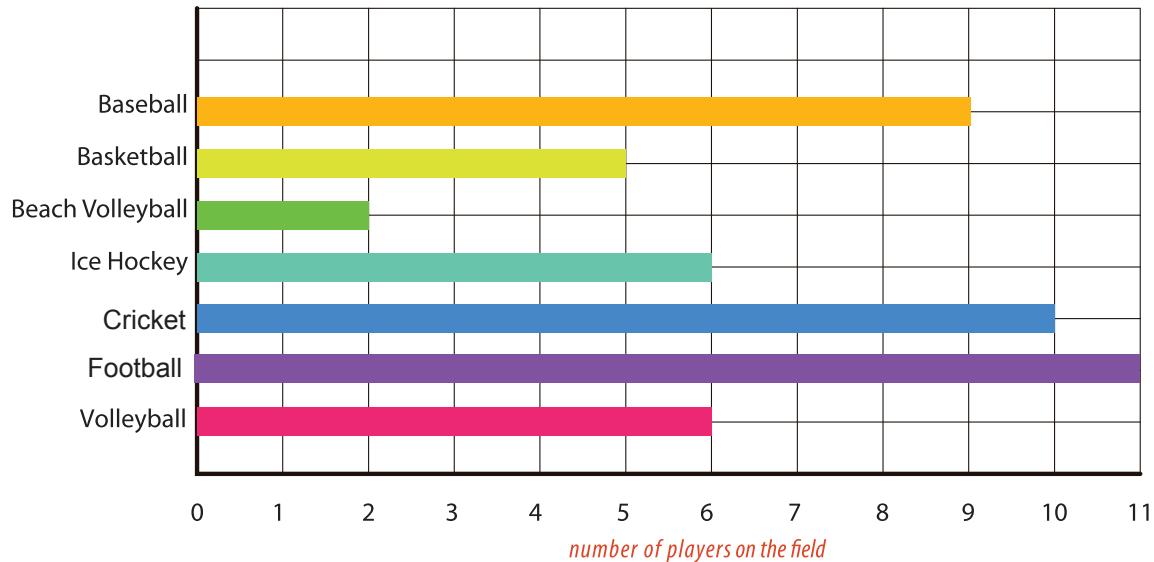
Bar graphs are used to show changes over time or to compare items.

Can you identify the x-axis on this graph? What does it show?

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Can you identify the y-axis on this graph? What does it show?

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1. Which sports have the most number of players on the field?

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2. How many more players does the basketball team have than the beach volleyball team?

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3. Which sports have the same number of players?

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4. Which sport has the least amount of players?

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5. How many fewer players does the cricket team have than the football team?

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6. Which sport has 9 players?

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