📊 Class 6 Data Handling Worksheet

By Thinking Juggernaut

Subject: Mathematics   **Topic:** Data Handling   **Questions:** 20   **Time:** 60 mins

🎯 What is Data Handling?

Data is a collection of information such as numbers, words, measurements, observations, or descriptions of things. **Data Handling** means collecting, organizing, and presenting this data in a way that makes it easy to understand.

Why do we collect data? We collect data to answer questions, make decisions, and understand patterns. For example: How many students like different sports? What is the most popular fruit? Which month has the highest rainfall?

📋 Ways to Organize Data

1️⃣ Tally Marks

Tally marks are used to count things quickly. Every four marks are crossed by a fifth mark.

I = 1   II = 2   III = 3   IIII = 4   H̶H̶H̶H̶ = 5

2️⃣ Pictographs

A pictograph uses pictures or symbols to represent data. Each symbol represents a certain number of items.
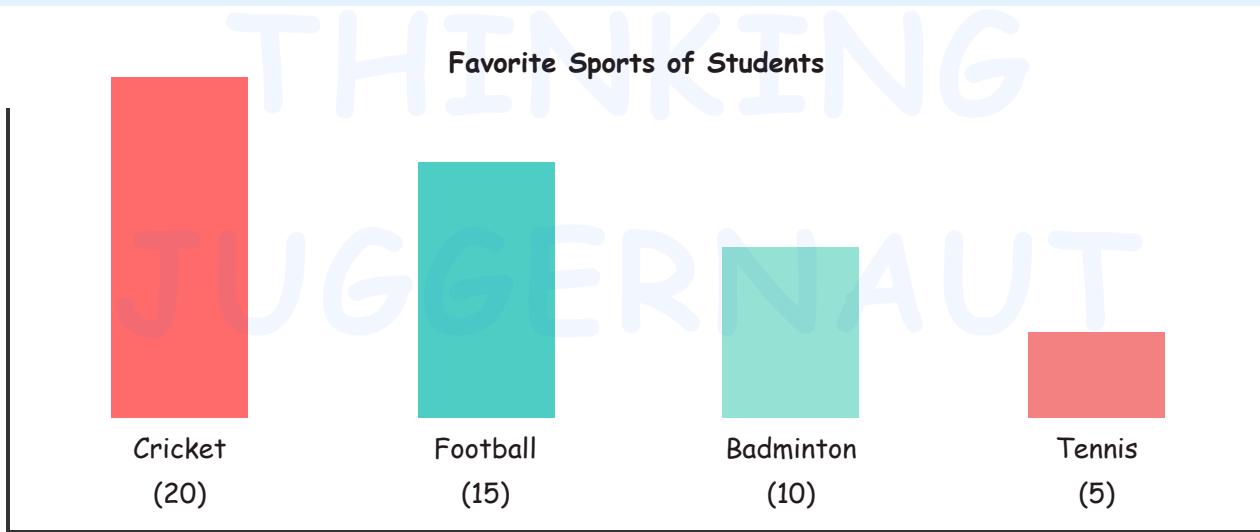
Example: Books Read by Students

Student	Books Read

Aman	📚📚📚
Priya	📚📚📚📚📚
Rohan	📚📚

Key: 📚 = 1 book

3️⃣ Bar Graphs

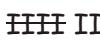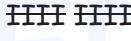A bar graph uses rectangular bars to show data. The height or length of each bar represents the value.

Favorite Sports of Students

Cricket	Football	Badminton	Tennis
(20)	(15)	(10)	(5)

📝 Practice Questions

⭐ **Section A: Easy Questions (1 mark each)**

Q1. What do tally marks help us do?

Q2. In a pictograph, if 🌟 = 2 stars, how many items do 🌟🌟🌟 represent?

Q3. The following tally marks show students who like ice cream: ~~IIII~~ ~~IIII~~ III
How many students like ice cream?

Q4. Complete the table by writing the number for each tally mark:

Color	Tally Marks	Number
Red	IIII II	
Blue	IIII IIII	
Green	IIII	

Q5. Look at this pictograph showing fruits sold:

Fruit	Number Sold
Apples	🍎 🍎 🍎 🍎
Bananas	🍌 🍌 🍌 🍌 🍌 🍌
Oranges	🍊 🍊

Key: Each symbol = 2 fruits

a) How many bananas were sold?

b) Which fruit was sold the least?

⭐⭐ **Section B: Medium Questions (2 marks each)**

Q6. The bar graph shows the number of vehicles passing a crossing in one hour:
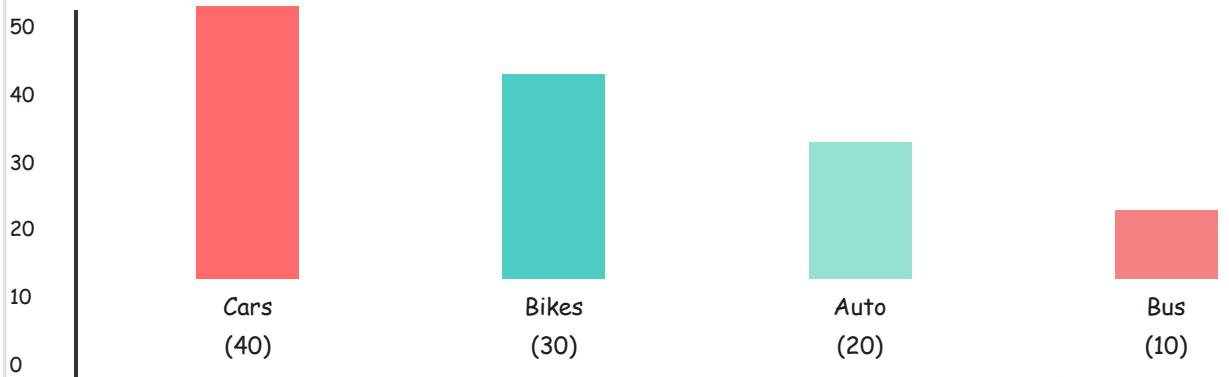
a) Which vehicle passed the most?

b) How many more cars passed than buses?

c) What is the total number of vehicles that passed?

Q7. A survey was done on favorite colors. Make a tally chart:

Red, Blue, Red, Green, Blue, Red, Yellow, Blue, Red, Green, Blue, Red, Red, Yellow

Color	Tally Marks	Number
Red		
Blue		
Green		
Yellow		

Q8. The pictograph shows toys collected for donation:

Day	Toys Collected
Monday	🧸 🧸 🧸
Tuesday	🧸 🧸 🧸 🧸 🧸
Wednesday	🧸 🧸
Thursday	🧸 🧸 🧸 🧸

Key: 🧸 = 5 toys

a) On which day were the maximum toys collected?

b) How many toys were collected on Monday?

c) What is the total number of toys collected in 4 days?

Q9. The marks obtained by 5 students in a test are: 18, 16, 19, 17, 20

a) Arrange the marks in ascending order

b) Who scored the highest marks if the marks belong to Amit, Neha, Raj, Sneha, and Vikram respectively?

c) What is the difference between highest and lowest marks?

Q10. Create a pictograph for the following data about pets owned by students:

Dogs: 8, Cats: 6, Rabbits: 4, Birds: 10

Use 🐾 to represent 2 pets

⭐⭐⭐ **Section C: Challenging Questions (3 marks each)**

Q11. The table shows rainfall (in cm) in different months:

| Month	Rainfall (cm)
June	15
July	25
August	30
September	20

a) Draw a bar graph for this data (use scale: 1 cm = 5 cm rainfall)
b) Which month had the highest rainfall?
c) What is the total rainfall in these 4 months?

Q12. A class of 30 students voted for their favorite subject. The results were:

Math: 12 students, Science: 8 students, English: 6 students, Social Studies: 4 students

a) Make a tally chart for this data
b) Which subject is most popular?
c) How many more students like Math than Social Studies?
d) Create a pictograph using 😊 = 2 students

Q13. Look at the bar graph showing books in a library:
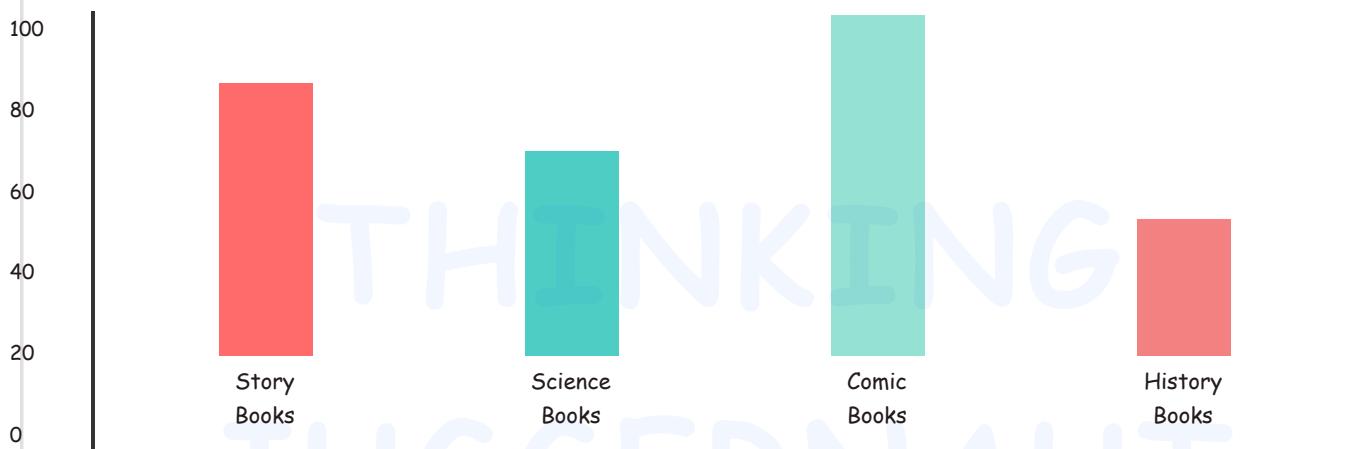
a) How many Comic Books are there?

b) Which type of book is least in number?

c) What is the difference between Story Books and Science Books?

d) If 20 more Science Books are added, how many will there be in total?

Q14. A shopkeeper recorded the number of cold drinks sold each day of the week:

Day	Mon	Tue	Wed	Thu	Fri	Sat
Drinks Sold	45	50	35	60	55	70

a) On which day were maximum drinks sold?

b) On which day were minimum drinks sold?

c) How many drinks were sold on Tuesday and Thursday together?

d) What is the total number of drinks sold in the week?

Q15. The pictograph shows the number of goals scored by different players:

Player	Goals
Rohit	⚽ ⚽ ⚽ ⚽
Virat	⚽ ⚽ ⚽ ⚽ ⚽ ⚽
Hardik	⚽ ⚽
Shikhar	⚽ ⚽ ⚽ ⚽ ⚽

Key: ⚽ = 3 goals

a) Who scored the maximum goals?

b) How many goals did Rohit score?

c) How many more goals did Virat score than Hardik?

d) What is the total number of goals scored by all players?

⭐ **Application-Based Questions (3 marks each)**

Q16. A survey was conducted in a class about students' favorite ice cream flavors. The data collected was: Chocolate - 15, Vanilla - 10, Strawberry - 8, Mango - 12.

a) Organize this data in a table

b) Create a pictograph using 🍦 = 2 students

c) Which flavor is most popular?

d) How many students were surveyed in total?

Q17. The temperature in a city was recorded for 6 days: Monday (25°C), Tuesday (28°C), Wednesday (30°C), Thursday (27°C), Friday (32°C), Saturday (29°C).

a) On which day was it hottest?

b) On which day was it coolest?

c) What is the difference between the hottest and coolest days?

d) Draw a bar graph for this data (use scale 1 cm = 5°C)

Q18. A fruit seller sold the following fruits in a day:

Apples: 24, Bananas: 36, Oranges: 18, Grapes: 30

a) If you make a pictograph with 🍇 = 6 fruits, how many symbols will you draw for each fruit?

b) Which fruit was sold the most?

c) How many more bananas were sold than oranges?

d) Create the pictograph

Q19. The number of visitors to a zoo on different days:

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Visitors	150	200	180	160	220

a) Draw a bar graph for this data (use scale 1 cm = 50 visitors)

b) Which day had the maximum visitors?

c) What is the total number of visitors for the week (Monday to Friday)?

d) If on Saturday 250 visitors came, how many more came on Saturday than Monday?

Q20. A class collected waste paper for recycling. The data for 5 weeks is:

Week 1: 12 kg, Week 2: 15 kg, Week 3: 18 kg, Week 4: 10 kg, Week 5: 20 kg

a) Make a table to organize this data

b) In which week was maximum paper collected?

c) In which week was minimum paper collected?

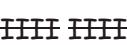d) What is the total paper collected in 5 weeks?

e) Draw a bar graph for this data

✅ Answer Key

Q1. Tally marks help us count things quickly and keep track of data as we collect it.

Q2. 🌟🌟🌟 = 3 × 2 = 6 items

Q3. ⅢⅢ ⅢⅢ III = 5 + 5 + 3 = 13 students

Q4.

Color	Tally Marks	Number
Red	ⅢⅢ II	7
Blue	ⅢⅢ ⅢⅢ	10
Green	IIII	4

Q5.
a) Bananas sold = 6 × 2 = 12 bananas
b) Oranges were sold the least

Q6.
a) Cars passed the most (40 cars)

b) Cars more than buses = 40 - 10 = 30 vehicles

c) Total vehicles = 40 + 30 + 20 + 10 = 100 vehicles

Q7.

Color	Tally Marks	Number
Red	IIII I	6
Blue	IIII	5
Green	II	2
Yellow	II	2

Q8.

a) Maximum toys collected on Tuesday (5 × 5 = 25 toys)

b) Monday: 3 × 5 = 15 toys

c) Total toys = 15 + 25 + 10 + 20 = 70 toys

Q9.

a) Ascending order: 16, 17, 18, 19, 20

b) Vikram scored the highest marks (20)

c) Difference = 20 - 16 = 4 marks

Q10.

Pet	Pictograph (🐾 = 2 pets)
Dogs	🐾 🐾 🐾 🐾
Cats	🐾 🐾 🐾
Rabbits	🐾 🐾
Birds	🐾 🐾 🐾 🐾 🐾

Q11.

a) Bar graph should be drawn with bars of heights: 3 cm (June-15), 5 cm (July-25), 6 cm (August-30), 4 cm (September-20)

b) August had the highest rainfall (30 cm)

c) Total rainfall = 15 + 25 + 30 + 20 = 90 cm

Q12.

a) Tally Chart:

Subject	Tally	Number
Math	~~IIII~~ ~~IIII~~ II	12
Science	~~IIII~~ III	8
English	~~IIII~~ I	6
Social Studies	IIII	4

b) Math is most popular

c) Math - Social Studies = 12 - 4 = 8 more students

d) Pictograph: Math (😊😊😊😊😊😊), Science (😊😊😊😊), English (😊😊😊), Social Studies (😊😊)

Q13.

a) Comic Books = 100 books

b) History Books are least (40 books)

c) Difference = 80 - 60 = 20 books

d) Science Books = 60 + 20 = 80 books

Q14.

a) Maximum on Saturday (70 drinks)

b) Minimum on Wednesday (35 drinks)

c) Tuesday + Thursday = 50 + 60 = 110 drinks

d) Total = 45 + 50 + 35 + 60 + 55 + 70 = 315 drinks

Q15.

a) Virat scored maximum goals (6 × 3 = 18 goals)

b) Rohit scored 4 × 3 = 12 goals

c) Virat - Hardik = 18 - 6 = 12 more goals

d) Total goals = 12 + 18 + 6 + 15 = 51 goals

Q16.

a) Table:

Flavor	Students
Chocolate	15
Vanilla	10
Strawberry	8
Mango	12

b) Pictograph: Chocolate (🍦🍦🍦🍦🍦🍦🍦), Vanilla (🍦🍦🍦🍦🍦), Strawberry (🍦🍦🍦🍦),
Mango (🍦🍦🍦🍦🍦🍦)
c) Chocolate is most popular
d) Total students = 15 + 10 + 8 + 12 = 45 students

Q17.
a) Hottest day: Friday (32°C)
b) Coolest day: Monday (25°C)
c) Difference = 32 - 25 = 7°C
d) Bar graph should be drawn with appropriate scale

Q18.
a) Apples: 24÷6 = 4 symbols, Bananas: 36÷6 = 6 symbols, Oranges: 18÷6 = 3 symbols, Grapes: 30÷6 = 5 symbols
b) Bananas were sold the most (36)
c) Bananas - Oranges = 36 - 18 = 18 more
d) Pictograph should show the symbols calculated in part (a)

Q19.
a) Bar graph with scale 1 cm = 50 visitors
b) Friday had maximum visitors (220)
c) Total = 150 + 200 + 180 + 160 + 220 = 910 visitors
d) Saturday - Monday = 250 - 150 = 100 more visitors

Q20.
a) Table:

Week	Paper (kg)
Week 1	12
Week 2	15

Week 3	18
Week 4	10
Week 5	20

b) Maximum in Week 5 (20 kg)

c) Minimum in Week 4 (10 kg)

d) Total = 12 + 15 + 18 + 10 + 20 = 75 kg

e) Bar graph should be drawn with appropriate scale

📊 Scoring Guide

Total Questions: 20 | Total Marks: 40

Score Range	Performance Level	What to Do Next
35-40	⭐⭐⭐ Excellent!	Outstanding! You've mastered basic data handling. You're ready for Class 7 concepts like mean, median, and mode.
28-34	⭐⭐ Very Good!	Great work! Practice more on creating bar graphs and interpreting pictographs.
20-27	⭐ Good Effort!	Keep practicing! Focus on understanding tally marks and how to read graphs carefully. Practice drawing bar graphs daily.
0-19	Keep Trying!	Review the concept boxes carefully. Practice making tally charts and simple pictographs with everyday data around you.

📝 **Tips for Improvement:**

- **Practice tally marks daily:** Count things around you using tally marks (books, pencils, etc.)
- **Read the key carefully:** In pictographs, always check what each symbol represents
- **Label your graphs:** Always write clear labels and titles on bar graphs
- **Use a ruler:** Draw neat and accurate bars in bar graphs
- **Check your counting:** Count twice to make sure you didn't miss any data

- **Organize before drawing:** Make a table first, then create graphs

🎯 **Common Mistakes to Avoid:**

- ❌ Forgetting to check what each symbol represents in a pictograph
- ❌ Not using a ruler when drawing bar graphs
- ❌ Missing the scale on a bar graph
- ❌ Counting tally marks incorrectly (remember: IIII = 5)
- ❌ Drawing bars of unequal width in bar graphs
- ❌ Not labeling axes in graphs

✨ **Great Job Completing This Worksheet!** ✨

Keep practicing data handling - it's a useful skill for life!

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