

## Chapter 14 Bar graphs

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Jan 2026

### Mindmap – Simple Notes

- What is a Bar Graph?
  - A visual representation of data using bars
  - Bars can be vertical or horizontal
  - All bars have equal width
  - Equal spacing between bars
- Purpose of a Bar Graph
  - Compare quantities easily
  - Show trends or patterns
  - Make data easy to understand
- Parts of a Bar Graph
  - Title
  - X-axis (horizontal) – categories
  - Y-axis (vertical) – values/numbers
  - Scale (e.g., 1 unit = 5 items)
  - Labels for both axes
- How to Read a Bar Graph
  1. Look at the title and labels
    - -= Check the scale
    - Find the height/length of each bar
    - Interpret the value it represents
- How to Draw a Bar Graph
  - Collect data
  - Choose a suitable scale
  - Draw X and Y axes
  - Mark categories on X-axis
  - Mark values on Y-axis
  - Draw bars of equal width with correct heights

### Notes with Relevant Examples

1. Example 1 – Reading a Bar Graph  
A bar graph shows the number of books read by five students in a month.

- Anil: 8 books
  - Beena: 5 books
  - Chitra: 10 books
  - David: 6 books
  - Esha: 7 books
2. Scale: 1 unit = 2 books  
→ Bar for Chitra = 5 units high ( $10 \div 2$ )  
Q: Who read the most books?  
A: Chitra
3. Example 2 – Drawing a Bar Graph  
Data: Fruits sold in a shop (in kg)
- Apples: 30 kg
  - Bananas: 50 kg
  - Oranges: 40 kg
  - Grapes: 20 kg
4. Choose scale: 1 unit = 10 kg  
→ Apple bar = 3 units, Banana = 5 units, etc.
5. Example 3 – Interpreting Trends  
Bar graph shows rainfall (in mm) from Jan to May.
- Highest bar in July → Most rain in July
  - Lowest bar in February → Least rain in Feb

## Unit Test

1. What is the main use of a bar graph?
2. Name the two axes in a vertical bar graph.
3. The scale of a bar graph is 1 unit = 5 students. If a bar is 6 units tall, how many students does it represent?
4. Look at the data below and draw a bar graph (use scale 1 unit = 2):
  - Red: 8
  - Blue: 6
  - Green: 10
  - Yellow: 4
5. From the bar graph you drew in Q4, which color is the most preferred?

## Worksheet

1. Study the following bar graph (imagined):  
It shows the number of pets owned by students in Class 5.
  - Dogs: 12

- Cats: 8
  - Birds: 5
  - Fish: 10
2. a) Which pet is the most common?  
b) How many more students have dogs than birds?  
c) What is the total number of pets?
  3. Choose a suitable scale and draw a bar graph for:
    - Monday: 15
    - Tuesday: 25
    - Wednesday: 20
    - Thursday: 10
    - Friday: 30
  4. True or False:
    - a) All bars in a bar graph must have the same width.
    - b) The space between bars can be unequal.
    - c) The Y-axis always shows categories.
  5. Write two advantages of using a bar graph.
  6. The scale of a bar graph is 1 unit = 4 apples. If Raj's bar is 7 units high, how many apples did he sell?

### Solutions – Unit Test

1. To compare quantities visually and make data easy to understand.
2. X-axis (categories) and Y-axis (values).
3.  $6 \times 5 = 30$  students.
4. (Student draws graph with bars: Red=4 units, Blue=3, Green=5, Yellow=2)
5. Green is the most preferred.

### Solutions – Worksheet

1. a) Dogs  
b)  $12 - 5 = 7$   
c)  $12 + 8 + 5 + 10 = 35$
2. Suitable scale: 1 unit = 5. Bars: Mon=3, Tue=5, Wed=4, Thu=2, Fri=6
3. a) True  
b) False  
c) False
4. (Any two)
  - Easy to compare data
  - Shows trends clearly



- Simple to read and understand
5.  $7 \times 4 = 28$  apples