

Graph It Right

Choose a graph that fits the data.

GRADE 7 • MA.7.DP.1.5

MA.7.DP.1.5 "Given a real-world numerical or categorical data set, choose and create an appropriate graphical representation."

NAME _____

DATE _____

MATCH DATA TO GRAPHS

Use a bar graph for categories and a line plot or histogram for numerical values. Use a line graph when numerical data are tracked in time order. Label both axes and use an even scale.

WORKED EXAMPLE

The library counted checkouts by genre: adventure 11, biography 13, poetry 17. Choose and create a graph.

1. The data are categories, so choose a bar graph.
2. Label the x-axis Genre and the y-axis Checkouts.
3. Draw bars with heights 11, 13, and 17.

Answer: Bar graph with Genre on the x-axis, Checkouts on the y-axis, and bars for adventure 11, biography 13, and poetry 17.

PRACTICE 5 problems

- 1** A snack survey found chips 12, fruit 9, crackers 4. Choose and create a graph.

ANSWER _____

- 2** Laps run at recess were 1, 2, 2, 4, 5, 5, 5, 7. Choose and create a graph.

ANSWER _____

- 3** Hours slept from Monday through Friday were 8, 7, 9, 8, 6. Choose and create a graph.

ANSWER _____

- 4** Students chose music clubs: band 15, choir 8, guitar 12, drums 5. Choose and create a graph.

ANSWER _____

- 5** Reading times in minutes were 14, 16, 19, 21, 23, 26, 28, 29. Choose and create a graph using intervals 10-14, 15-19, 20-24, and 25-29.

ANSWER _____

APPLY IT Show your work

- 1** A student posts art videos during one school week. Views were Monday 24, Tuesday 31, Wednesday 29, Thursday 36, and Friday 44. Choose and create a graph that shows the change over time.

WORK SPACE

ANSWER _____

- 2** For a school spirit day, students picked a theme: sports 18, space 14, animals 9, and movies 7. Choose and create a graph to compare the choices.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A student recorded numbers of text messages received in twelve hours: 2, 4, 6, 6, 7, 8, 9, 12, 14, 15, 16, 18. Create a histogram using intervals 0-4, 5-9, 10-14, and 15-19. Explain why a histogram fits better than a bar graph.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A snack survey found chips 12, fruit 9, crackers 4. Choose and create a graph.	Bar graph with Snack on the x-axis, Students on the y-axis, and bars: chips 12, fruit 9, crackers 4.
2	Laps run at recess were 1, 2, 2, 4, 5, 5, 5, 7. Choose and create a graph.	Line plot with X marks: 1: 1, 2: 2, 4: 1, 5: 3, 7: 1.
3	Hours slept from Monday through Friday were 8, 7, 9, 8, 6. Choose and create a graph.	Line graph with days on the x-axis and hours slept on the y-axis: Monday 8, Tuesday 7, Wednesday 9, Thursday 8, Friday 6.
4	Students chose music clubs: band 15, choir 8, guitar 12, drums 5. Choose and create a graph.	Bar graph with Club on the x-axis, Students on the y-axis, and bars: band 15, choir 8, guitar 12, drums 5.
5	Reading times in minutes were 14, 16, 19, 21, 23, 26, 28, 29. Choose and create a graph using intervals 10-14, 15-19, 20-24, and 25-29.	Histogram with frequencies: 10-14: 1, 15-19: 2, 20-24: 2, 25-29: 3.

PART 2 • APPLY IT

- Line graph with days on the x-axis and views on the y-axis: Monday 24, Tuesday 31, Wednesday 29, Thursday 36, Friday 44.** A line graph fits because the views are recorded in time order. Plot the five ordered pairs and connect them.
- Bar graph with Theme on the x-axis, Students on the y-axis, and bars: sports 18, space 14, animals 9, movies 7.** A bar graph fits because the themes are categories. Use one bar for each theme.

CHALLENGE

Histogram frequencies: 0-4: 2, 5-9: 5, 10-14: 2, 15-19: 3. A histogram fits because the data are numerical and grouped into intervals, not separate categories.

Accept equivalent titles, axis labels, and scales that show all values accurately. For line plots, stacked X marks or an accurate frequency table are equivalent.