

Plot the Story

Choose and build the graph that fits the data.

GRADE 8 • MA.8.DP.1.1

MA.8.DP.1.1 "Given a set of real-world bivariate numerical data, construct a scatter plot or a line graph as appropriate for the context."

NAME _____

DATE _____

MATCH DATA TO GRAPH

Use a scatter plot for paired data from different people, objects, or events. Use a line graph when data changes over time, and connect the points in time order.

WORKED EXAMPLE

A weather station recorded temperatures of 12 C at 11:00, 14 C at 13:00, and 16 C at 15:00. Construct an appropriate graph.

1. Choose a line graph because the temperatures were recorded over time.
2. Label the x-axis Time and the y-axis Temperature (C).
3. Plot (11,12), (13,14), and (15,16), then connect them in time order.

Answer: Line graph with points (11,12), (13,14), and (15,16), connected in order.

PRACTICE 5 problems

- 1** Construct a scatter plot with x = practice hours and y = free throws made: (0,4), (2,7), (4,9), (6,8).

ANSWER _____

- 2** Construct a line graph for pages read at the end of each day: (0,0), (1,18), (2,35), (3,48).

ANSWER _____

- 3** Four students reported sleep hours and alertness ratings: (3,2), (5,4), (7,8), (9,7). Construct an appropriate graph.

ANSWER _____

- 4** A cyclist's distance from home, in miles, was recorded each hour: (0,0), (1,3), (2,6), (3,10). Construct an appropriate graph.

ANSWER _____

- 5** At different school events, the number of posters displayed and attendees were: (0,20), (2,28), (4,25), (6,36), (8,40). Construct an appropriate graph.

ANSWER _____

APPLY IT Show your work

- 1** An esports club compares each player's practice time, in hours, with points scored in a tournament: (1,7), (2,9), (3,10), (4,17), (5,18). Construct the appropriate graph. Label both axes.

WORK SPACE

ANSWER _____

- 2** A student council account gained followers over five days: (1,24), (2,27), (3,31), (4,35), (5,38). Construct the appropriate graph. Label both axes.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A music app records the total number of songs listened to at the end of each day: (0,0), (1,6), (2,9), (3,17), (4,21). Construct the appropriate graph and explain why it fits.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Construct a scatter plot with x = practice hours and y = free throws made: (0,4), (2,7), (4,9), (6,8).	Scatter plot with points (0,4), (2,7), (4,9), and (6,8). Do not connect the points.
2	Construct a line graph for pages read at the end of each day: (0,0), (1,18), (2,35), (3,48).	Line graph with points (0,0), (1,18), (2,35), and (3,48), connected in order.
3	Four students reported sleep hours and alertness ratings: (3,2), (5,4), (7,8), (9,7). Construct an appropriate graph.	Scatter plot with points (3,2), (5,4), (7,8), and (9,7). Do not connect the points.
4	A cyclist's distance from home, in miles, was recorded each hour: (0,0), (1,3), (2,6), (3,10). Construct an appropriate graph.	Line graph with points (0,0), (1,3), (2,6), and (3,10), connected in time order.
5	At different school events, the number of posters displayed and attendees were: (0,20), (2,28), (4,25), (6,36), (8,40). Construct an appropriate graph.	Scatter plot with points (0,20), (2,28), (4,25), (6,36), and (8,40). Do not connect the points.

PART 2 • APPLY IT

- Scatter plot with x-axis Practice Time (hours) and y-axis Tournament Points. Plot (1,7), (2,9), (3,10), (4,17), and (5,18), without connecting the points.** Each point represents a different player, so use a scatter plot.
- Line graph with x-axis Day and y-axis Followers. Plot (1,24), (2,27), (3,31), (4,35), and (5,38), then connect the points in order.** The number of followers is tracked across days, so use a line graph.

CHALLENGE

Line graph with points (0,0), (1,6), (2,9), (3,17), and (4,21), connected in day order. A line graph fits because the total is recorded over time.

Accept any clear, evenly spaced scale that includes all data values. Scatter plot points should not be connected, while line graph points should be connected in time order.