

Plot It Right

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 _____

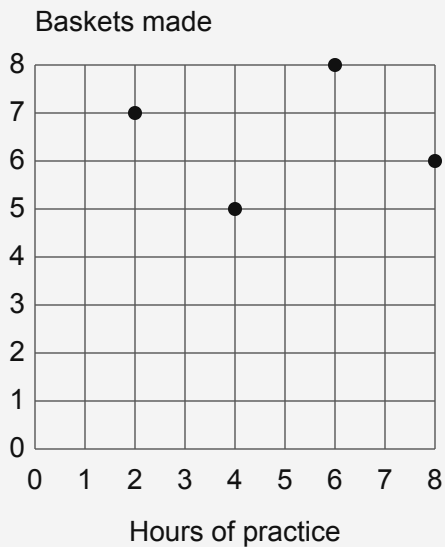
DATE _____

CHOOSE THE DISPLAY

Use a scatter plot for paired measurements when the order of the data does not matter. Use a line graph when data are collected in time order, then connect the points to show change.

WORKED EXAMPLE

Make a scatter plot for these paired data: hours of practice and free-throw baskets made: (2,7), (4,5), (6,8), (8,6).



1. Label the horizontal axis Hours of practice.
2. Label the vertical axis Baskets made.
3. Plot (2,7), (4,5), (6,8), and (8,6).
4. Do not connect the points.

Answer: A scatter plot with points (2,7), (4,5), (6,8), and (8,6).

PRACTICE 4 problems

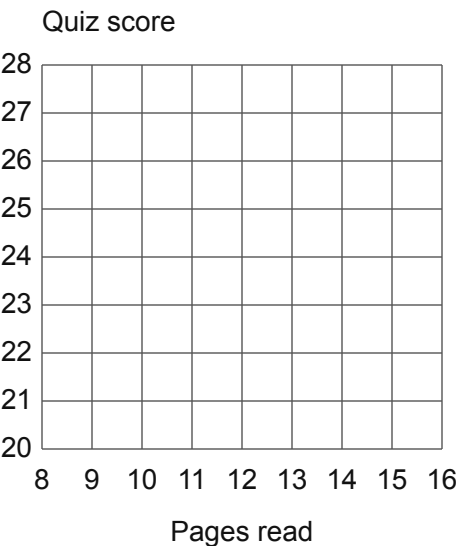
1 A coach pairs each player's number of practice shots with that player's number of made shots. Choose the best display.

ANSWER _____

2 A weather club records the high temperature each day for five days. Choose the best display.

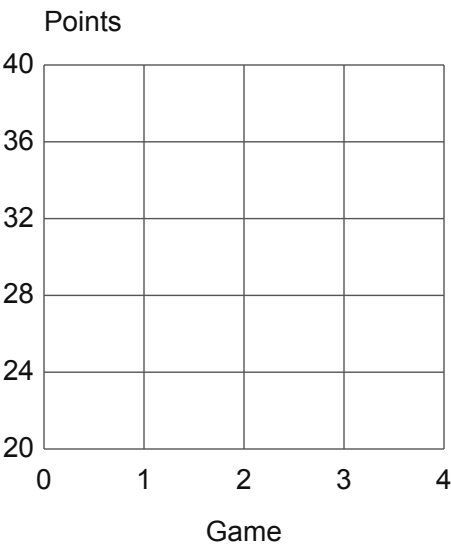
ANSWER _____

3 A student records pages read and quiz score: (10,21), (12,25), (14,23). Make the best graph. List the points you plot.



ANSWER _____

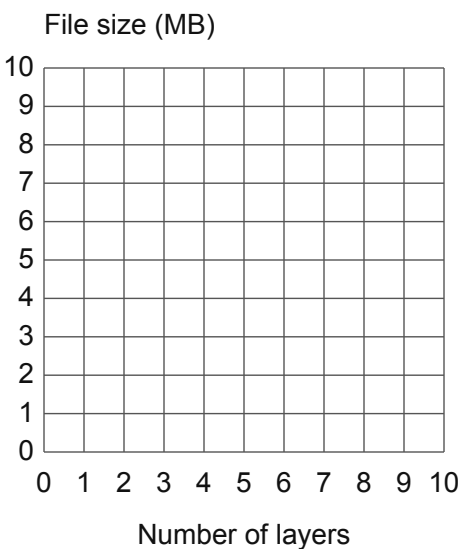
4 A team scores 30, 34, 28, and 36 points in Games 1 through 4. Make the best graph. State what to do with the points.



ANSWER _____

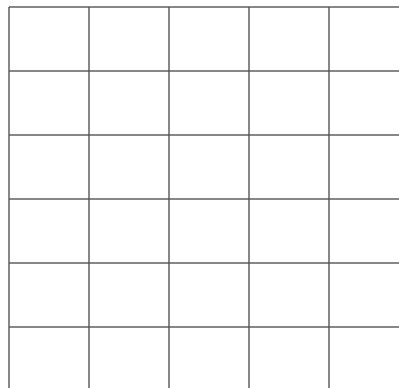
APPLY IT Show your work**1**

Maya saves digital-art files. On the grid, make a scatter plot for number of layers and file size in MB: (1,9), (3,7), (5,6), (7,4), (9,3). Do not connect the points.

**ANSWER** _____**2**

A basketball team scores 16, 20, 18, 24, and 22 points in Games 1 through 5. Make a graph that shows how the score changed over time.

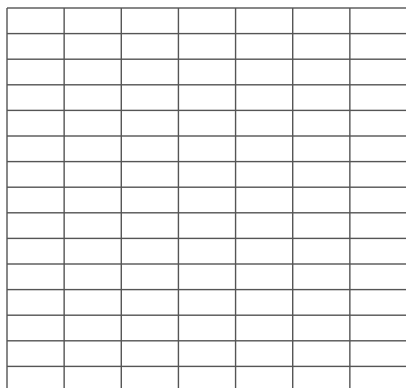
Title: _____ Label both axes and the scale.

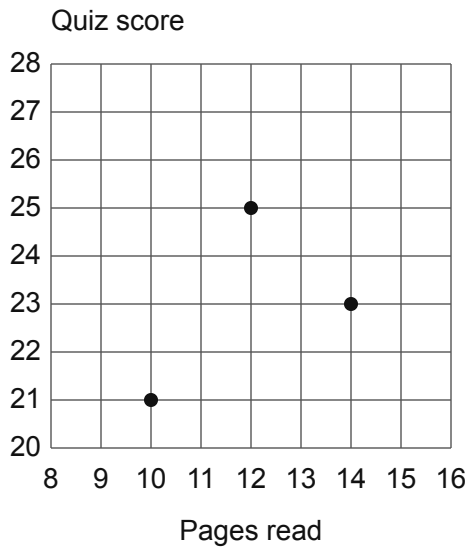
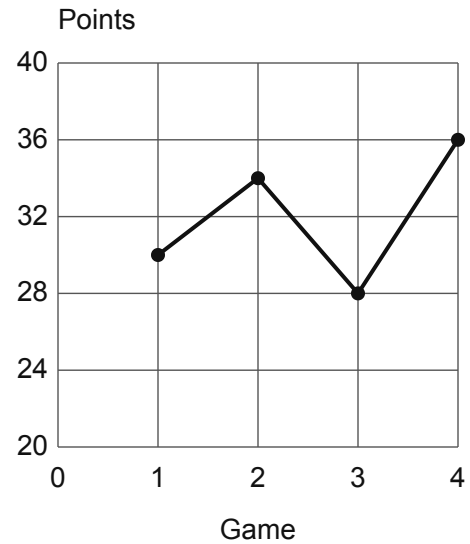
**ANSWER** _____

CHALLENGE One step up

Use the blank grid to make a line graph of temperatures for seven days: 62, 68, 65, 71, 69, 73, 66 degrees. Add a vertical axis from 60 to 75 with ticks every 1 degree. Plot and connect the points. Explain why a line graph fits. Label the horizontal axis with Days 1 through 7.

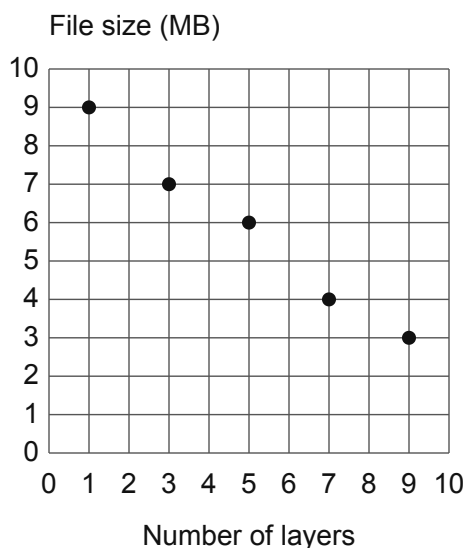
Title: _____ Label both axes and the scale.



PRACTICE 1**Scatter plot.****PRACTICE 3****Scatter plot; plot (10,21), (12,25), and (14,23).****PRACTICE 2****Line graph.****PRACTICE 4****Line graph; plot (1,30), (2,34), (3,28), and (4,36), then connect the points in game order.**

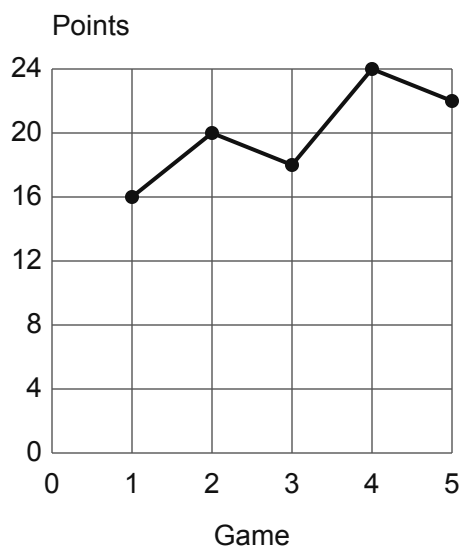
APPLY IT 1

A scatter plot with points (1,9), (3,7), (5,6), (7,4), and (9,3), not connected. Label the axes as shown and plot each ordered pair. A scatter plot fits paired measurements from separate files.



APPLY IT 2

A line graph with points (1,16), (2,20), (3,18), (4,24), and (5,22), connected in order. Put game number on the horizontal axis and points scored on the vertical axis. Connect the points because the games are in time order.



CHALLENGE

Add a vertical axis labeled Temperature (degrees) from 60 to 75. Plot (1,62), (2,68), (3,65), (4,71), (5,69), (6,73), and (7,66), then connect them in order. A line graph fits because the temperatures are recorded in day order.

Accept equivalent accurate axis scales when all points are placed correctly. Scatter-plot points should not be connected, while line-graph points should be connected in time order.

