LESSON MAKER PRO

Graph Matchup

Choose the graph that fits the data.

GRADE 7 · 7.PS.2.f

7.PS.2.f "Compare data represented in histograms with the same data represented in other graphs, including but not limited to line plots (dot plots), circle graphs, and stem-and-leaf plots..."

NAME _____ DATE _____

PICK THE BEST VIEW

Use a histogram to group number data into intervals and show the overall shape. Use a line plot or stem-and-leaf plot when exact values matter. Use a circle graph to show parts of one whole.

WORKED EXAMPLE

Data: 31, 33, 36, 38, 39, 41. Which graph best shows the overall shape without listing every score?

1. The values go from 31 to 41.
2. Group the values into equal intervals: 30-34, 35-39, and 40-44.
3. A histogram shows how many values are in each interval.

Answer: Histogram.

PRACTICE 5 problems

1 The data are 11, 11, 12, 13, 13, 13, 17. Choose a line plot or histogram to find how many times 13 occurs. Why?

ANSWER _____

2 A survey has comics 8, mysteries 10, fantasy 14, and biographies 8. Choose a circle graph or line plot to show each genre's share of all responses.

ANSWER _____

3 Data: 62, 65, 67, 71, 74, 78. Choose a stem-and-leaf plot or histogram if you need every original value to find the median.

ANSWER _____

4 A histogram of 30 lap times has its tallest bar at 50-59 seconds. What does this show? Which graph could show every exact lap time?

ANSWER _____

5 A line plot has 18 twice, 19 once, 20 four times, and 22 once. A histogram of the same data uses intervals 18-19, 20-21, and 22-23. How many values are in 18-19?

ANSWER _____

APPLY IT Show your work

1 Mia recorded pages read on eight days: 14, 16, 16, 18, 21, 23, 23, 23. Choose a line plot or histogram to show the exact number of days for each page total. How many days did she read 23 pages?

WORK SPACE

ANSWER _____

2 An esports club poll shows racing 9, sports 6, puzzle 3, and adventure 6. Which graph best shows each game type's share of the poll? What fraction chose racing?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A histogram shows 12 game times in 10-14 minutes, 8 in 15-19 minutes, and 5 in 20-24 minutes. Jordan says the median time is exactly 14 minutes. Is Jordan justified? Name a graph of the same data that could verify the exact median.

_____

_____

ANSWER KEY

Graph Matchup

GRADE 7 · 7.PS.2.f

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	The data are 11, 11, 12, 13, 13, 13, 17. Choose a line plot or histogram to find how many times 13 occurs. Why?	**Line plot, because it shows each exact value and its frequency.**
2	A survey has comics 8, mysteries 10, fantasy 14, and biographies 8. Choose a circle graph or line plot to show each genre's share of all responses.	**Circle graph, because it shows each category as part of the total.**
3	Data: 62, 65, 67, 71, 74, 78. Choose a stem-and-leaf plot or histogram if you need every original value to find the median.	**Stem-and-leaf plot, because it keeps every exact value.**
4	A histogram of 30 lap times has its tallest bar at 50-59 seconds. What does this show? Which graph could show every exact lap time?	**More laps took 50-59 seconds than any other interval. A line plot or stem-and-leaf plot could show exact times.**
5	A line plot has 18 twice, 19 once, 20 four times, and 22 once. A histogram of the same data uses intervals 18-19, 20-21, and 22-23. How many values are in 18-19?	**3**

PART 2 · APPLY IT

1. **Line plot; 3 days.** A line plot keeps each exact page total and shows its frequency. The value 23 appears three times.
2. **Circle graph; 3/8.** There are 24 responses. Racing is 9/24, which simplifies to 3/8.

CHALLENGE

No. There are 25 times, so the median is the 13th value. It is in the 15-19 minute interval, not 14. A line plot or stem-and-leaf plot could verify the exact median.

Accept either a line plot or a stem-and-leaf plot when the response asks for a graph that preserves exact values. For the circle-graph fraction, accept 9/24 or 3/8.