

Graph Matchup

Compare the same data in different graph forms.

GRADE 6 • 6.PS.1.f

6.PS.1.f "Compare data represented in a circle graph with the same data represented in other graphs, including but not limited to bar graphs, pictographs, and line plots (dot plots)..."

NAME _____

DATE _____

PART 1: PRACTICE

A circle graph shows how categories make one whole. Change a percent or fraction into a count using the total, then choose a circle graph for shares, a bar graph for category comparisons, or a line plot for individual values.

WORKED EXAMPLE

A circle graph of 48 votes shows 25% chose art. How many votes chose art? Which graph best compares vote counts for several choices?

1. $25\% = \frac{1}{4}$.
2. $\frac{1}{4}$ of 48 = 12.
3. A bar graph compares several vote counts clearly.

Answer: 12 votes; bar graph

PRACTICE 5 problems

- 1** A circle graph shows 35 hikers' favorite trails. The lake trail is 40%. How many hikers chose the lake trail?

ANSWER _____

- 2** A bar graph shows Chess 8, Robotics 14, and Art 6. What fraction of the circle graph should be Robotics?

ANSWER _____

- 3** A club lists books read: Maya 9, Eli 9, Noor 5. Which graph, circle or bar, best compares the students' totals? Why?

ANSWER _____

- 4** A line plot shows quiz scores: 6, 6, 8, 9, 9, 9. Which graph, circle or line plot, better shows the individual scores? Why?

ANSWER _____

- 5** A circle graph shows 45 poll responses. Comics are $\frac{1}{5}$ of the responses. What height should the Comics bar have?

ANSWER _____

APPLY IT Show your work

- 1** Part 2: Apply. A game-design club survey has Strategy 21, Sports 11, Puzzle 7, and Racing 3 votes. What percent chose Strategy? Which graph best shows Strategy's share of all votes?

WORK SPACE

ANSWER _____

- 2** A student tracks pages of a graphic novel read on six days: 11, 15, 11, 19, 15, 11. Should the student use a circle graph or a bar graph to show each day's amount? Justify.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Part 3: Challenge. A circle graph has categories $A = \frac{1}{2}$, $B = \frac{1}{3}$, and $C = \frac{1}{6}$. Which bar graph matches it? Explain. Choice A: A 15, B 10, C 5. Choice B: A 18, B 9, C 3. Choice C: A 16, B 8, C 8.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A circle graph shows 35 hikers' favorite trails. The lake trail is 40%. How many hikers chose the lake trail?	14 hikers
2	A bar graph shows Chess 8, Robotics 14, and Art 6. What fraction of the circle graph should be Robotics?	1/2
3	A club lists books read: Maya 9, Eli 9, Noor 5. Which graph, circle or bar, best compares the students' totals? Why?	Bar graph, because the bars make the totals easy to compare.
4	A line plot shows quiz scores: 6, 6, 8, 9, 9, 9. Which graph, circle or line plot, better shows the individual scores? Why?	Line plot, because it shows each score and repeated scores.
5	A circle graph shows 45 poll responses. Comics are 1/5 of the responses. What height should the Comics bar have?	9 responses

PART 2 • APPLY IT

- 50%; circle graph, because it shows Strategy as part of all the votes.** There are 42 votes total. Since 21 is half of 42, Strategy is 50%.
- Bar graph, because it compares the number of pages read on each day.** Each day is a separate category. Bar heights make the daily amounts easier to compare than circle slices.

CHALLENGE

Choice A. The total is 30, and $15/30 = 1/2$, $10/30 = 1/3$, and $5/30 = 1/6$.

Accept equivalent fractions, such as $2/4$ for $1/2$. For graph-choice explanations, accept any accurate reason tied to parts of a whole, category comparison, or individual values.