

Numbers Tell Stories

Use counts, percentages, and averages to compare neighborhoods.

WG.13.a "explaining how data is used to describe and compare populations; and"

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each data measure, circle each comparison word or phrase, and number the two reasons planners need both counts and percentages.

Planning for Riverton

- ① City planners in the fictional city of Riverton use data to learn about its four neighborhoods. A population count tells how many people live in each area, but one number cannot tell the whole story. Planners also examine age groups and household size. These measures help them describe who lives there and compare neighborhoods fairly.

RIVERTON NEIGHBORHOOD DATA

Neighborhood	Total population	Under age 18 (%)	Age 65 or older (%)	Average household size
Harbor	12,400	22	14	2.6
Oak	9,800	18	21	2.1
Mesa	15,100	29	9	3.4
Pine	7,700	24	17	2.8

- ② The table combines counts, percentages, and an average. Mesa has the largest total population, while Pine has the smallest. Yet Oak has the highest share of residents age 65 or older, even though it has fewer residents than Harbor. Percentages allow planners to compare age patterns without assuming that neighborhoods with more people always have more older residents.
- ③ Data can reveal needs as well as differences. Riverton planners might consider a senior center in an area with a large older-adult share, or after-school programs where the youth share is high. They should use several measures before deciding. A total population count shows the possible scale of a service, while percentages show which group makes up more of each neighborhood.

2 ANSWER WITH EVIDENCE _____ Use the passage

- 1** Which neighborhood has the highest percentage of residents under age 18? Which has the highest percentage of residents age 65 or older?
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- 2** Compare Pine and Harbor using two measures from the table. State one difference in total population and one difference in average household size.
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- 3** Oak has fewer residents than Harbor. In which neighborhood do older residents make up a larger part of the population, and by how many percentage points?
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- 4** Explain why planners should not choose a service location only by finding the neighborhood with the largest total population. Use one example from the table.
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3 YOUR TURN _____ Your own words

Choose one Riverton neighborhood and recommend either a senior center or an after-school program. Write exactly two sentences that name two data measures and explain how each supports your recommendation.

PART 1 • READ AND MARK

Underline each data measure, circle each comparison word or phrase, and number the two reasons planners need both counts and percentages. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Which neighborhood has the highest percentage of residents under age 18? Which has the highest percentage of residents age 65 or older?	Mesa has the highest under-18 percentage, 29%. Oak has the highest age-65-or-older percentage, 21%.
2	Compare Pine and Harbor using two measures from the table. State one difference in total population and one difference in average household size.	Pine has 7,700 residents and Harbor has 12,400. Pine's average household size is 2.8, compared with Harbor's 2.6.
3	Oak has fewer residents than Harbor. In which neighborhood do older residents make up a larger part of the population, and by how many percentage points?	Older residents make up a larger part of Oak's population. Oak's 21% is 7 percentage points higher than Harbor's 14%.
4	Explain why planners should not choose a service location only by finding the neighborhood with the largest total population. Use one example from the table.	The largest population does not show which age group makes up the largest share. For example, Mesa has the largest population but the lowest age-65-or-older percentage, while Oak has the highest older-adult percentage.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Mesa would be a strong location for an after-school program because it has the highest under-18 share, 29%, and the largest population, 15,100. The percentage shows that young people make up a large part of Mesa, and the count suggests that many residents could use the program.

Accept equivalent comparisons that use the table accurately. For the open response, accept either service and neighborhood when the student cites two correct measures and explains how both support the recommendation.