

AP Statistics - Variables and Categorical Data Displays - Test

Common Core AP STAT 1.1, AP STAT 1.2, AP STAT 1.3, HSS-ID.A.1 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This 45-minute test covers variables, frequency tables, bar graphs, pie charts, and comparing categorical distributions. Show every calculation, round percents to the nearest tenth, and write conclusions in context.

About this test

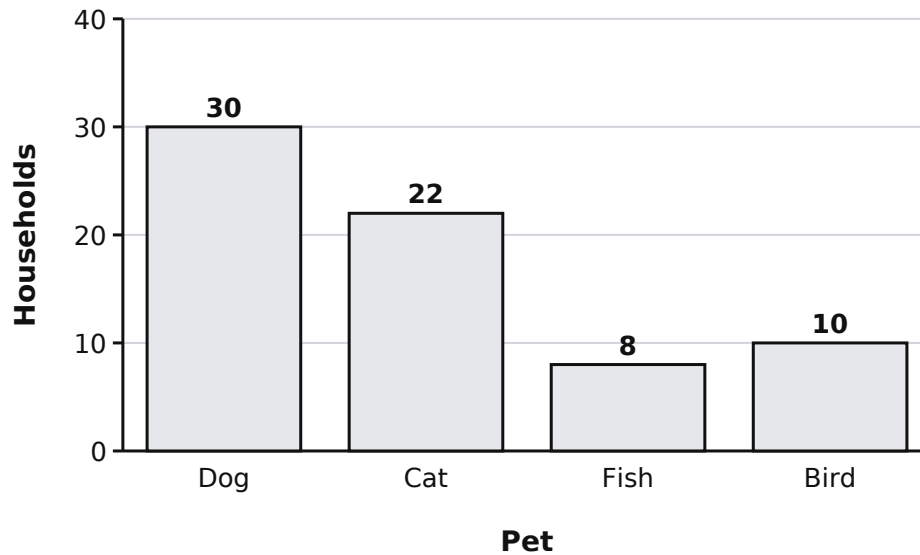
- Grade: AP Statistics
- Chapter: Variables and Categorical Data Displays
- Standards: AP STAT 1.1, AP STAT 1.2, AP STAT 1.3, HSS-ID.A.1
- Time: 45 minutes
- Total: 20 points

Question 1 - Variable types [2 pts]

Classify each as categorical or quantitative. (0.5 point each)

- Number of siblings
- Eye color
- Zip code
- Time to run a mile in minutes

Question 2 - Frequency table [3 pts]



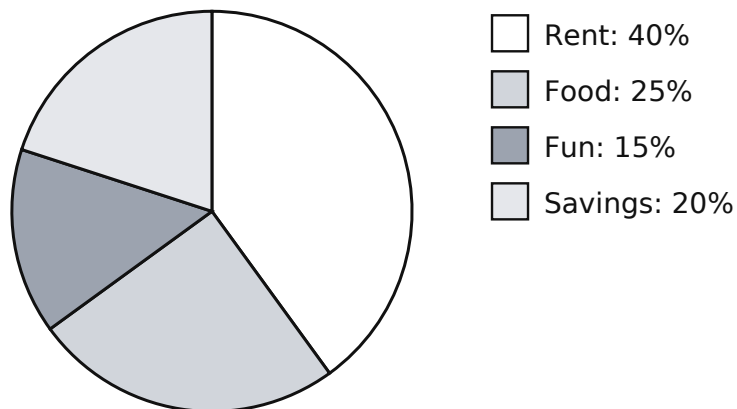
Pets owned by 70 households.

- (a) How many households were surveyed? (1 point)
- (b) Find the relative frequency of each pet as a percent. (2 points)

Question 3 - Missing category [2 pts]

A poll of 200 adults reports that 48% prefer tea, 30% prefer coffee, and 14% prefer juice. The remaining adults prefer water. Find the number who prefer water.

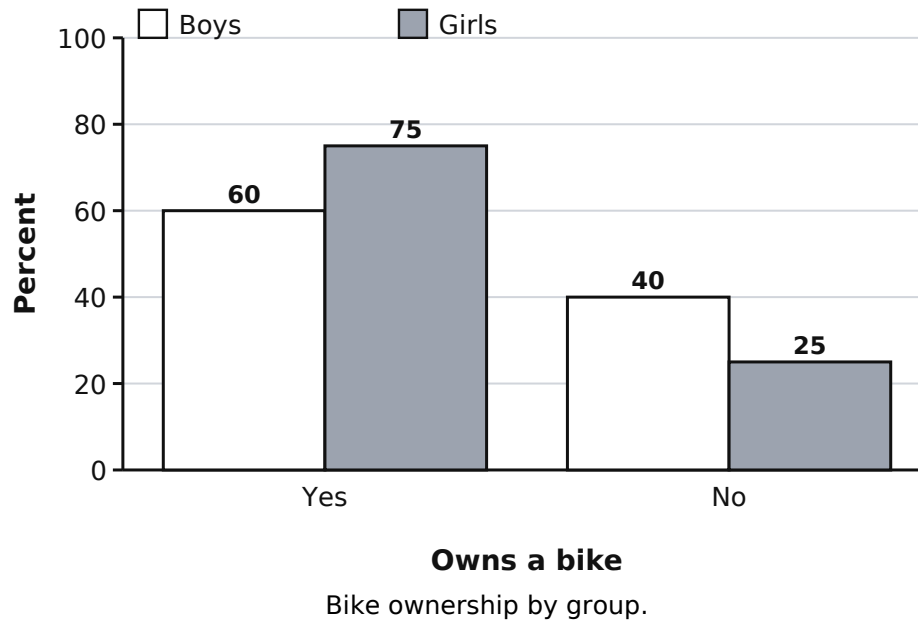
Question 4 - Pie chart [2 pts]



Monthly spending of a student.

Find the central angle for the Food and Fun slices. (1 point each)

Question 5 - Compare groups [3 pts]



The data come from 50 boys and 80 girls. (a) Find the number of boys and the number of girls who own a bike. (2 points) (b) Explain why percents are used to compare the groups. (1 point)

Question 6 - Appropriate display [2 pts]

A survey lets each student choose all the school clubs they belong to. Explain why a pie chart is not appropriate and name a better display.

Question 7 - Misleading graph [2 pts]

A bar graph of two test scores, 78 and 84, uses a vertical axis starting at 75. How many times as tall does the second bar look compared with the first? How many times as large is the actual score?

Question 8 - Find the total [2 pts]

In a survey, 63 students chose basketball, which is 21% of the students. How many students were surveyed?

Question 9 - Describe the distribution [2 pts]

In a survey of 250 students, 100 prefer online classes, 90 prefer in-person classes, and 60 prefer a hybrid. Write one or two sentences describing the distribution in context using percents.