

Unit 3: Two-Variable Statistics

PRACTICE · SET 2

Name: _____ Date: _____

Show all work. Round to 2 decimal places unless told otherwise. Write each answer on the line provided.

1. A two-way table shows: of 80 students, 30 own a dog, of whom 18 also own a cat. In total 25 students own a cat. How many students own NEITHER a dog nor a cat?

Answer: _____

3. A scatter plot has these two points on its trend line: (2, 5) and (6, 13). Find the slope of the line of best fit.

Answer: _____

5. The line of best fit is $y = -2x + 15$. For what value of x does $y = 5$?

Answer: _____

7. Two points on a line of best fit are (0, 8) and (4, 20). Write the equation of the line in the form $y = mx + b$; give the y -intercept b .

Answer: _____

9. A survey of 200 people is shown in a two-way table. 120 are adults and 80 are children. Among adults, 90 prefer video. What is the relative frequency of adults who prefer video, out of all 200 people, as a fraction in lowest terms?

Answer: _____

2. In a two-way table, 45 people were surveyed. 20 like tea, 30 like coffee, and 12 like both. What is the relative frequency of people who like coffee, given as a fraction in lowest terms?

Answer: _____

4. The line of best fit is $y = 3x + 4$. Predict the value of y when $x = 7$.

Answer: _____

6. A two-way table row for 'Freshmen' shows 24 chose Option A and 16 chose Option B. What is the relative frequency of Option A within the Freshmen row, as a fraction in lowest terms?

Answer: _____

8. For a line of best fit passing through (1, 7) and (5, 19), find the slope m .

Answer: _____

10. The residual for a data point is defined as (actual y) minus (predicted y). The line of best fit is $y = 4x + 1$. For the data point (3, 15), find the residual.

Answer: _____

11. A line of best fit is $y = 0.5x + 2$. Predict y when $x = 10$.

Answer: _____

12. In a two-way table, the total surveyed is 150. The joint frequency for 'owns a bike AND rides to school' is 45. What is this joint relative frequency as a decimal?

Answer: _____