

Grade 8 - Scatter Plots and Association - Test

Common Core 8.SP.A.1, 8.SP.A.2 · maths-pdf.fr/en/

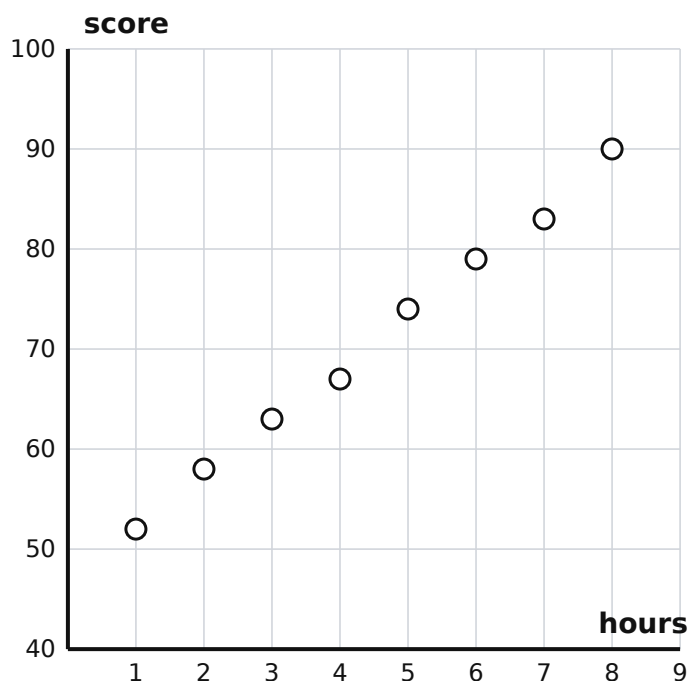
Name: _____ Class: _____ Date: ____/____/____

This 20-point test checks scatter plots, patterns of association, outliers and informal trend lines (Common Core 8.SP.A.1 and 8.SP.A.2). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

About this test

- Grade: Grade 8
- Chapter: Scatter Plots and Association
- Standards: 8.SP.A.1, 8.SP.A.2
- Time: 45 minutes
- Total: 20 points

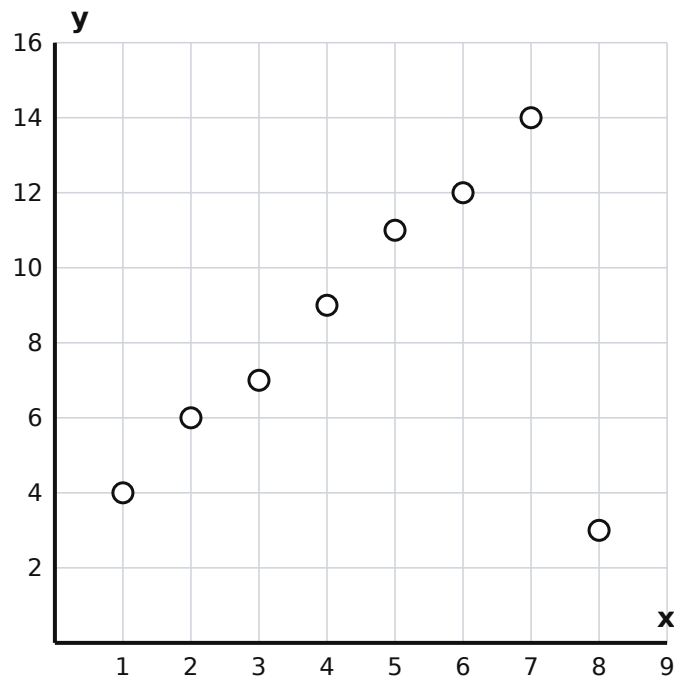
Question 1 - Describe the pattern [3 pts]



Hours of sleep versus score.

Describe the association between the variables: type (positive, negative or none), shape (linear or nonlinear), and strength.

Question 2 - Identify an outlier [2 pts]



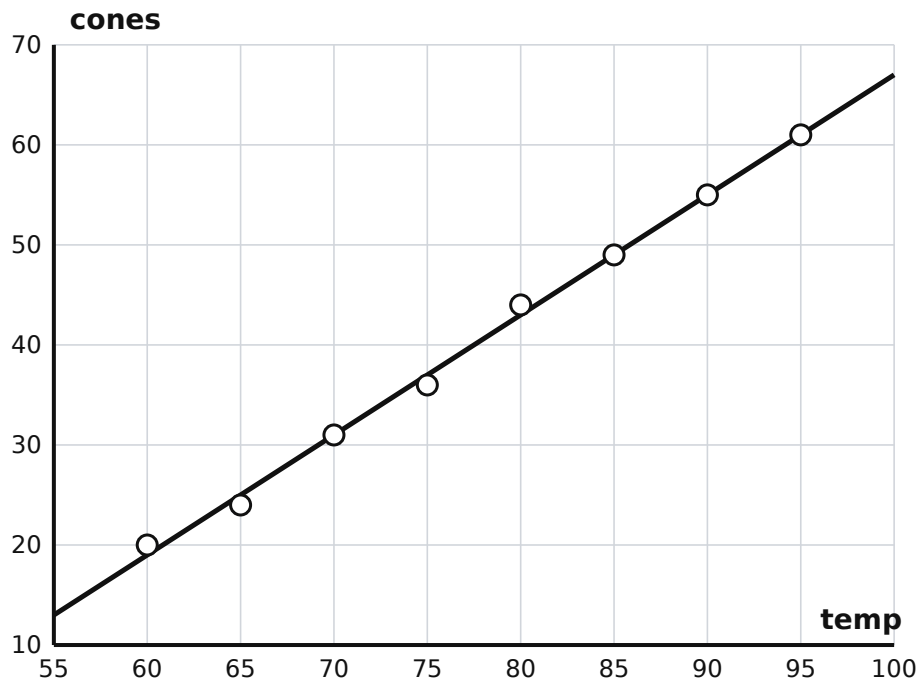
Eight points.

Identify the outlier and say how it differs from the other points.

Question 3 - Predict the association [2 pts]

For each pair, predict the association: (a) a car's speed and the time to travel 100 miles, (b) a person's age and the number of letters in their first name.

Question 4 - Slope of a trend line [3 pts]



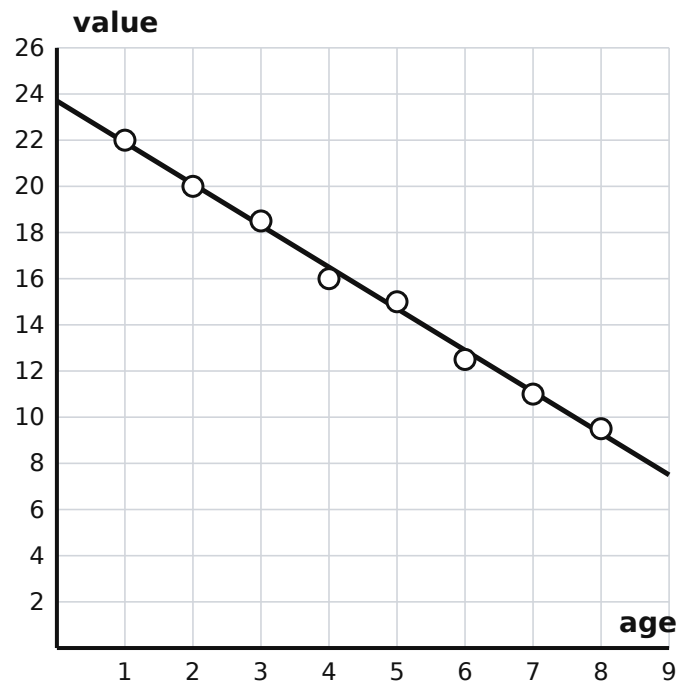
Ice cream cones sold.

A trend line passes through (65,25) and (95,61). Find its slope and explain what it means for the ice cream truck.

Question 5 - Use a trend line [3 pts]

The trend line $y = 5.3x + 47$ models the score y after x hours of study. Predict the score for 5 hours. Is it reasonable to use this line for 20 hours? Explain.

Question 6 - Compare lines [3 pts]



Car data with a trend line.

The plot shows car value (thousands of dollars) by age with a trend line. Two students draw different lines: $y = -1.8x + 23.7$ and $y = -3x + 30$. Which fits better? Use the point at age 8.

Question 7 - Cause [2 pts]

A study finds that cities with more ice cream shops also have more swimming pool accidents. Does one cause the other? Explain.

Question 8 - Draw a conclusion [2 pts]

A scatter plot has points in two clusters with no pattern between the clusters. Describe what the clusters mean.