

Scatterplot Question Lab

Ask questions that need paired number data.

GRADE 8 • 8.PS.3.a

8.PS.3.a "Formulate questions that require the collection or acquisition of data with a focus on scatterplots."

NAME _____

DATE _____

QUESTIONS FOR SCATTERPLOTS

A scatterplot question compares two numerical measurements for each person or object. Ask how one measurement is related to another, and make sure each data pair comes from the same source.

WORKED EXAMPLE

Turn this topic into a scatterplot question: weekly reading time and pages read by students.

1. Measure both amounts for each student.
2. Use reading time as x and pages read as y.
3. Ask about the relationship between the amounts.

Answer: How does weekly reading time relate to the number of pages a student reads?

PRACTICE 4 problems

- 1** Which question needs data for a scatterplot? A. What is each student's favorite lunch? B. How does the number of absences relate to a student's final grade? C. Which bus route does each student take?

ANSWER _____

- 2** Write a scatterplot question about hours of sleep and quiz scores.

ANSWER _____

- 3** Which data pair could be plotted on a scatterplot for each student? A. Backpack color and height B. Number of siblings and minutes spent exercising C. Favorite game and game rating

ANSWER _____

- 4** A skate shop wants to compare skateboard length and price. Write a question, then name x and y.

ANSWER _____

APPLY IT Show your work

- 1** Your soccer team wants to see whether warm-up time is connected to shooting accuracy. Write a scatterplot question. State the two numbers to record for each player.

WORK SPACE

ANSWER _____

- 2** A game club recorded practice time and tournament points for six players. Write a question a scatterplot could investigate. Label x and y .

GAME CLUB DATA

Player	Practice Minutes	Tournament Points
A	20	8
B	35	11
C	45	15
D	60	17
E	75	20
F	90	24

ANSWER _____

CHALLENGE One step up

A student asks, "Which after-school club is most popular?" Explain why this is not a scatterplot question. Rewrite it as a scatterplot question, and name the two numbers to collect for each student.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Which question needs data for a scatterplot? A. What is each student's favorite lunch? B. How does the number of absences relate to a student's final grade? C. Which bus route does each student take?	B. How does the number of absences relate to a student's final grade?
2	Write a scatterplot question about hours of sleep and quiz scores.	How does the number of hours of sleep relate to a student's quiz score?
3	Which data pair could be plotted on a scatterplot for each student? A. Backpack color and height B. Number of siblings and minutes spent exercising C. Favorite game and game rating	B. Number of siblings and minutes spent exercising
4	A skate shop wants to compare skateboard length and price. Write a question, then name x and y.	How does skateboard length relate to price? x: skateboard length; y: price.

PART 2 • APPLY IT

- How does warm-up time relate to shooting accuracy? Record warm-up minutes and shooting-accuracy percentage for each player.** Collect one paired set of numerical measurements from each player. Plot warm-up minutes as x and shooting-accuracy percentage as y.
- How does practice time relate to tournament points? x: practice minutes; y: tournament points.** Each player has two numerical values. Plot practice minutes against tournament points to investigate their relationship.

CHALLENGE

It is not a scatterplot question because club choice is a category, not two numerical measurements. How does the number of club meetings a student attends each month relate to the number of hours the student spends on homework each week? Collect monthly club meetings and weekly homework hours for each student.

Accept equivalent questions that name a clear group and compare two numerical measurements from the same person or object. Accept either variable on x if the student labels both axes consistently.