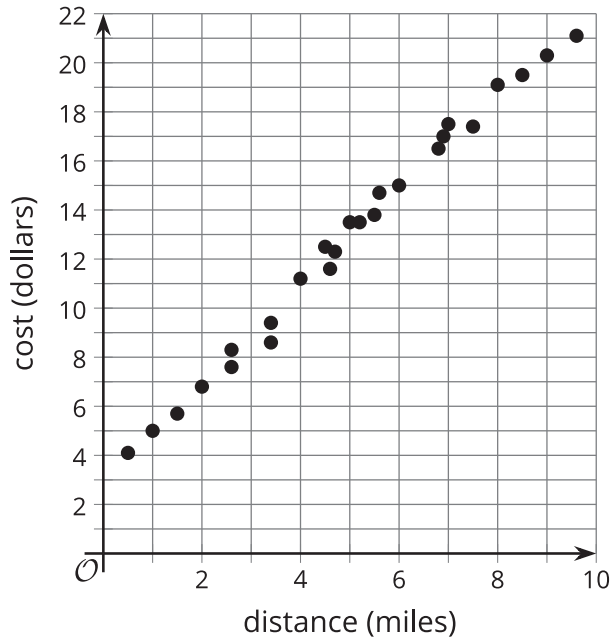# Unit 3 Lesson 7: The Correlation Coefficient

1 Which One Doesn't Belong: Linear Models (Warm up)
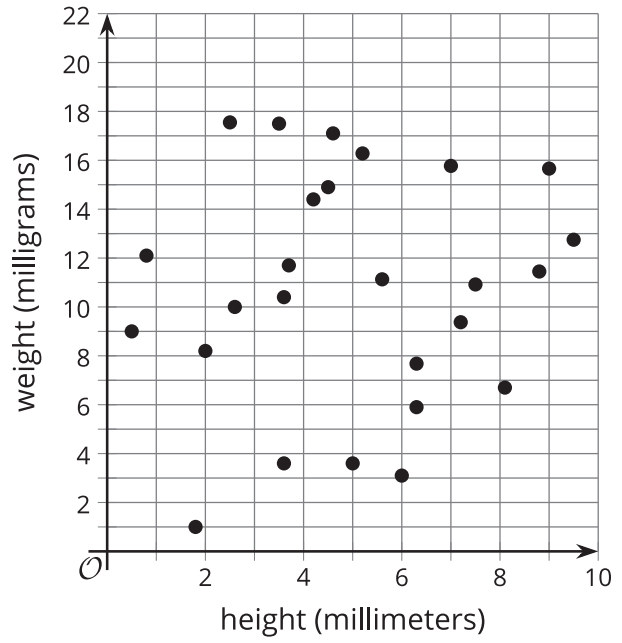
Student Task Statement

Which one doesn't belong?
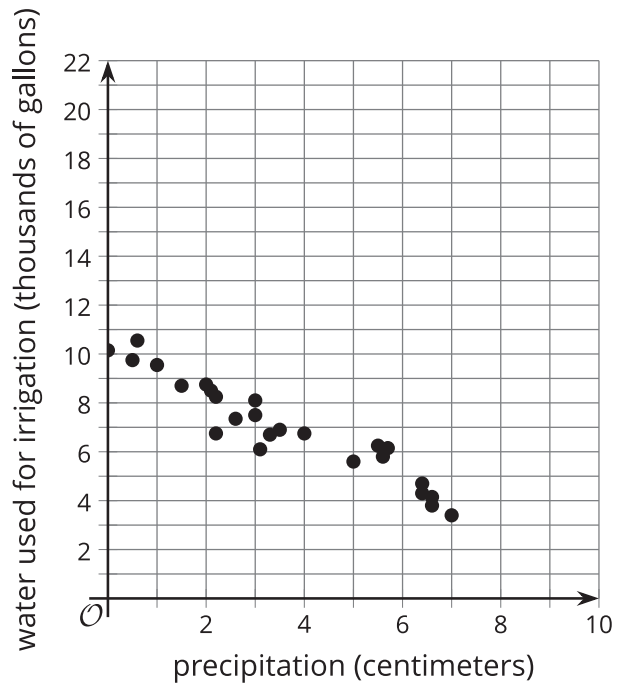
A

B

C — water used for irrigation (thousands of gallons) vs. precipitation (centimeters)

D — number of phytoplankton (tens of thousands) vs. temperature (degrees Celsius)
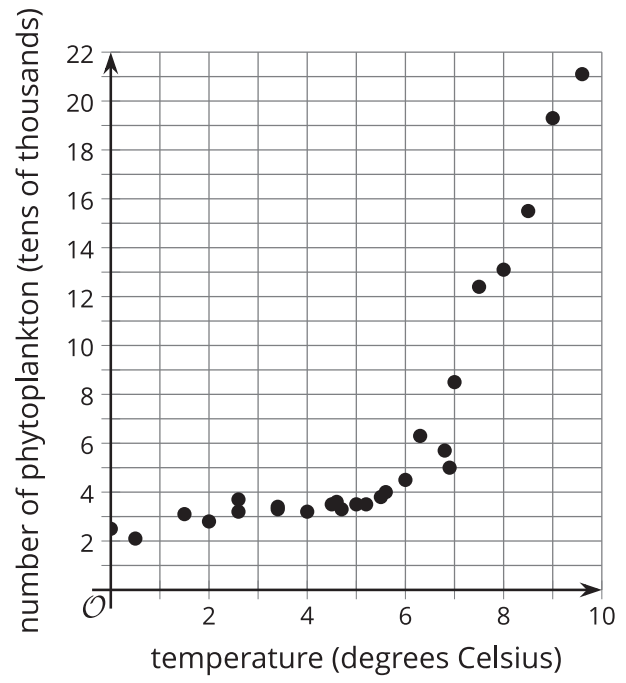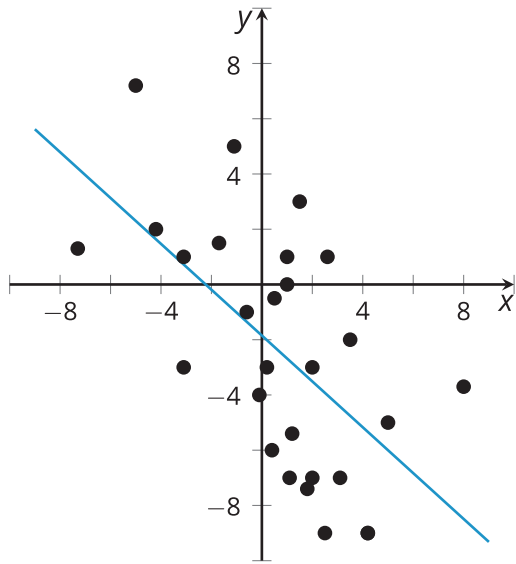
2 Card Sort: Scatter Plot Fit
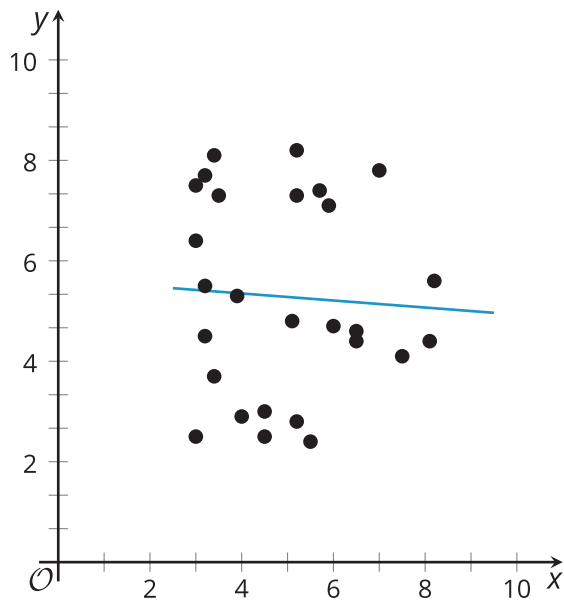
Student Task Statement

Your teacher will give you a set of cards that show scatter plots of data. Sort the cards into 2 categories of your choosing. Be prepared to explain the meaning of your categories. Then, sort the cards into 2 categories in a different way. Be prepared to explain the meaning of your new categories.
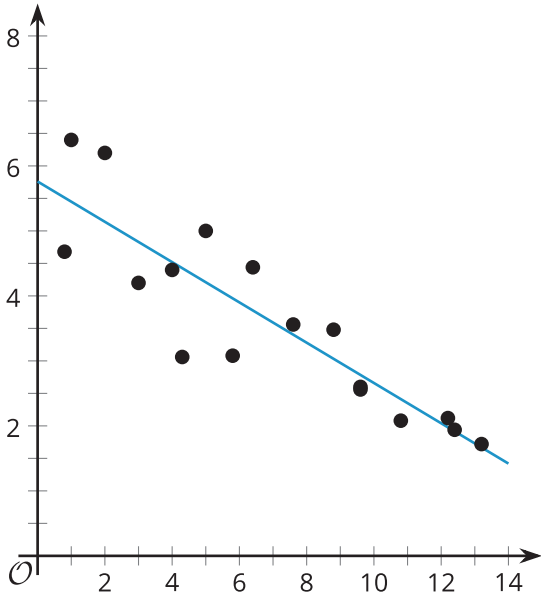
Activity Synthesis

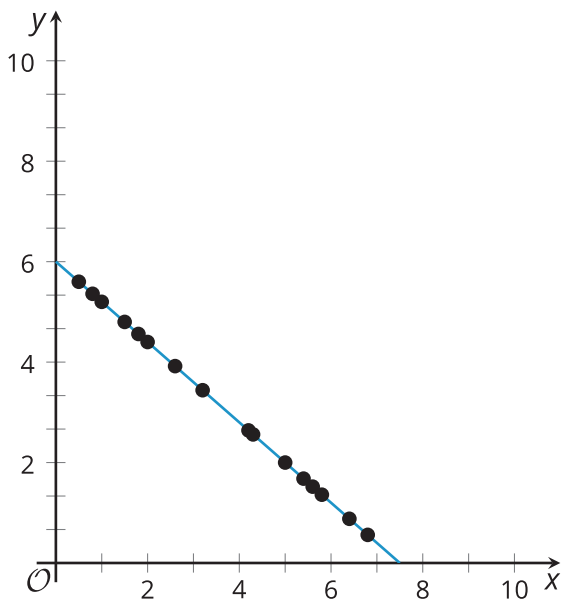**A:** $y = -0.83x - 1.85, r = -0.61$
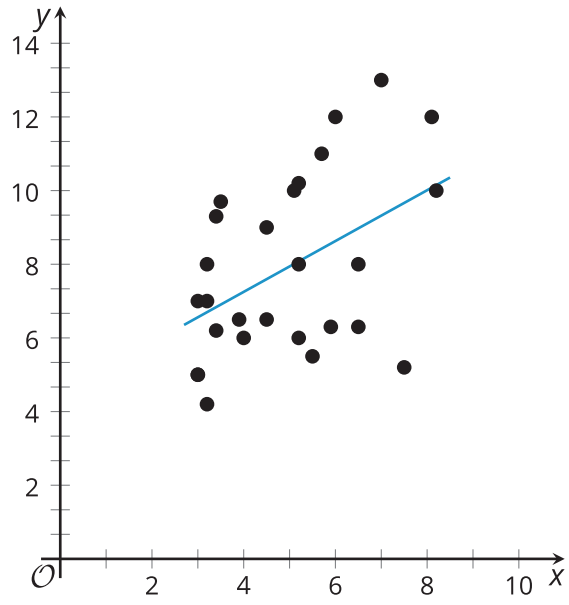

B: $y = -0.07x + 5.63, r = -0.06$

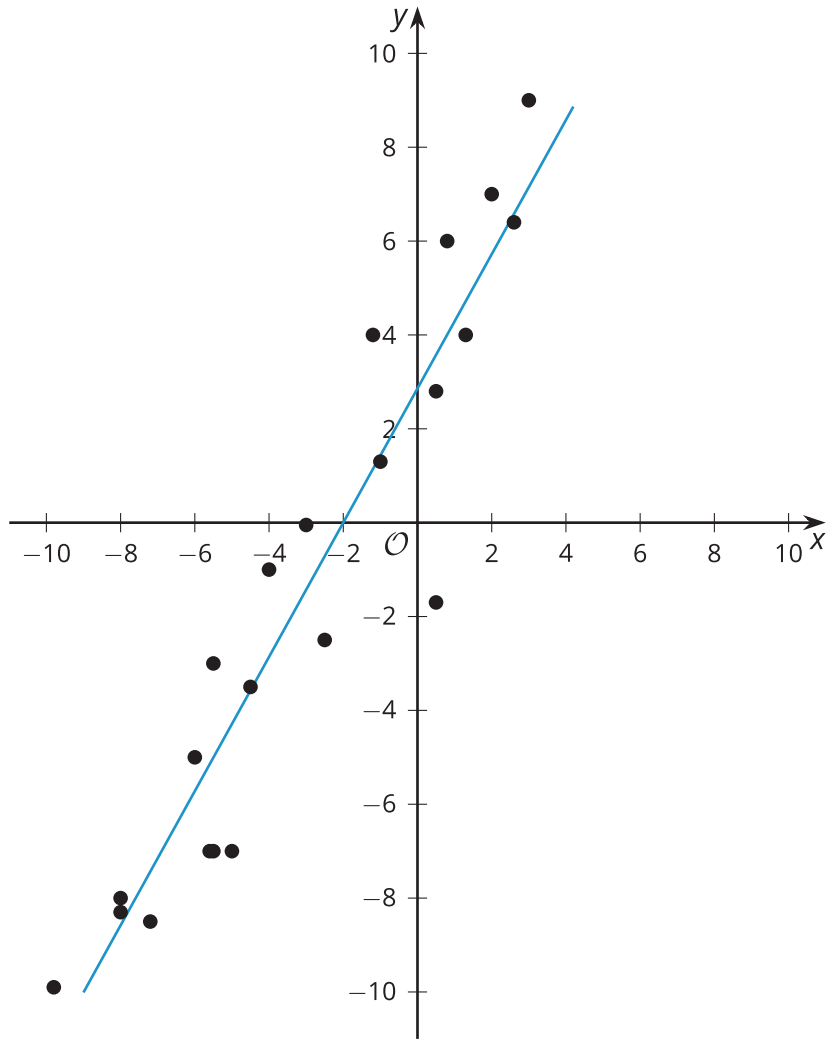**C:** $y = -0.31x + 5.76, r = -0.88$

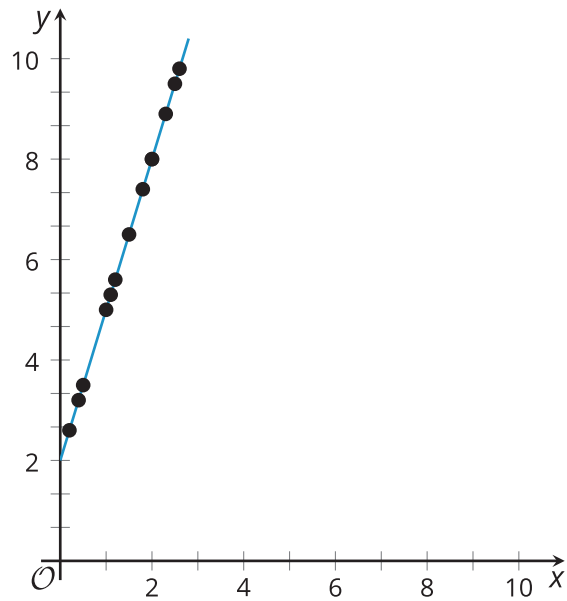**D:** $y = -0.8x + 6, r = -1$

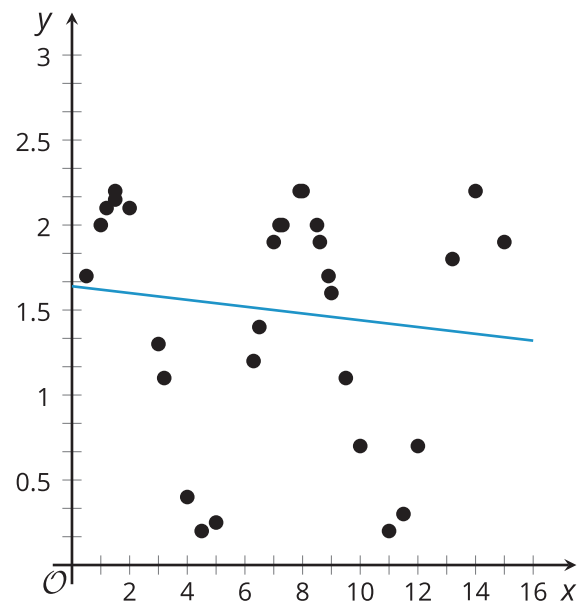**E:** $y = 0.69x + 4.49, r = 0.46$

F: $y = 1.43x + 2.86$, $r = 0.94$
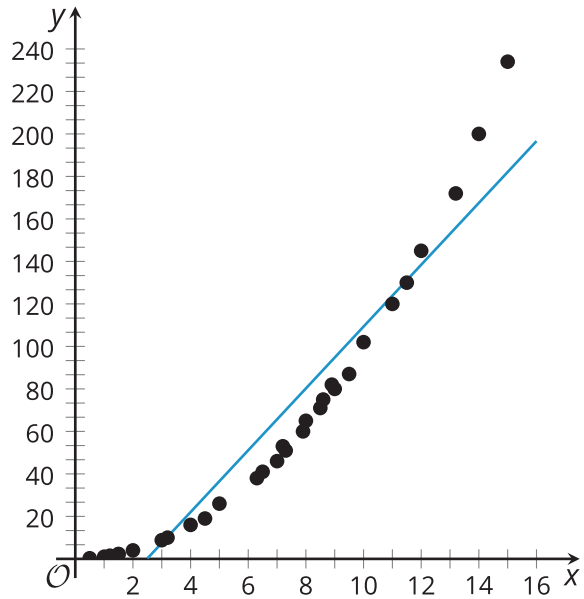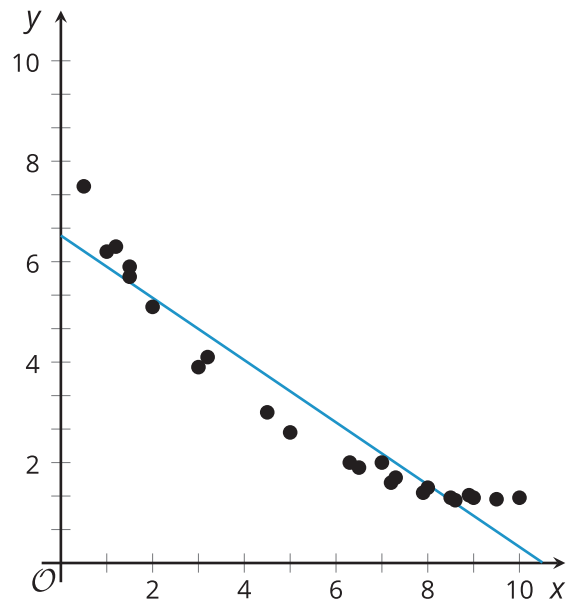
G: $y = 3x + 2, r = 1$

H: $y = -0.02x + 1.64, r = -0.13$
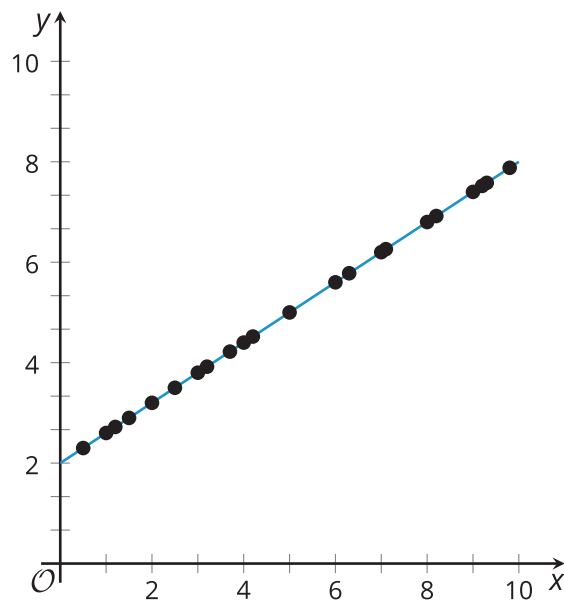
I: $y = 14.55x - 36.18, r = 0.95$

J: $y = -0.62x + 6.52, r = -0.96$
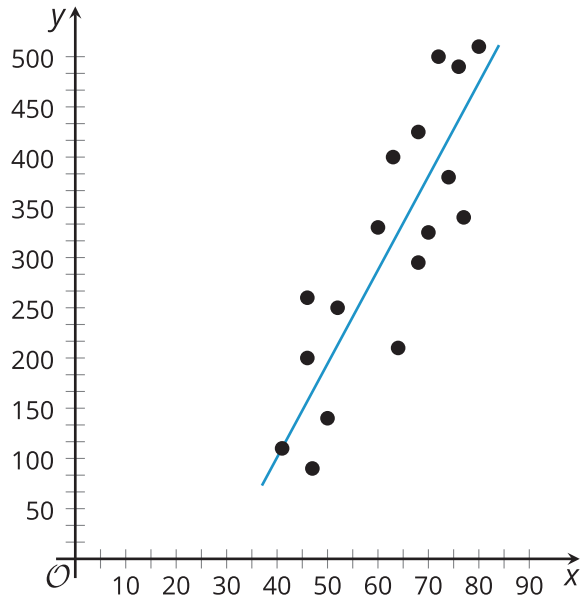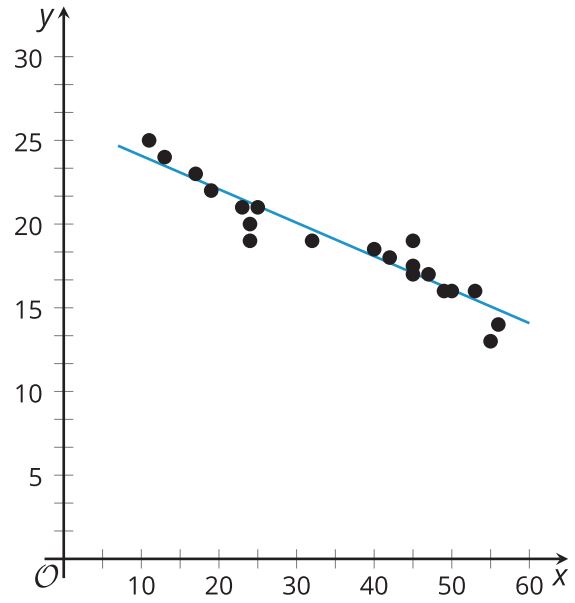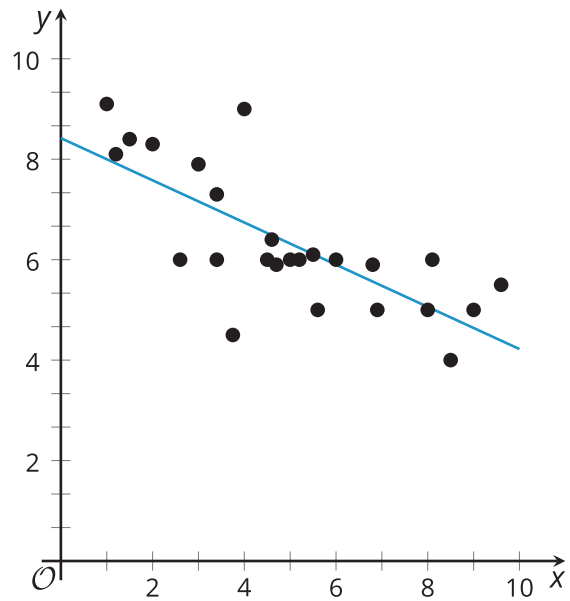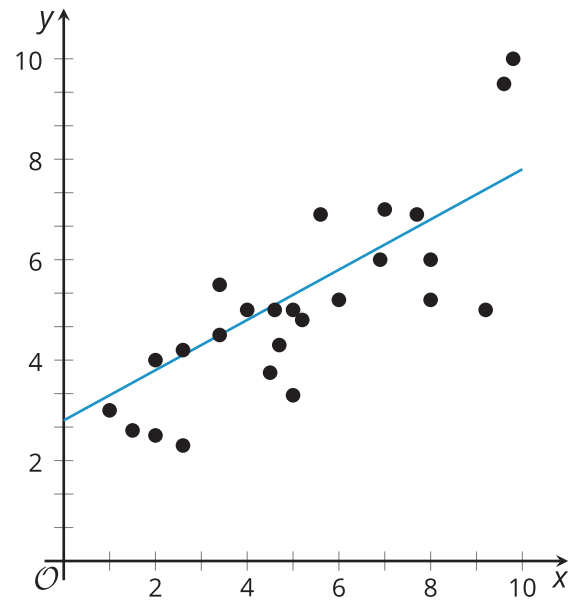
3 Matching Correlation Coefficients
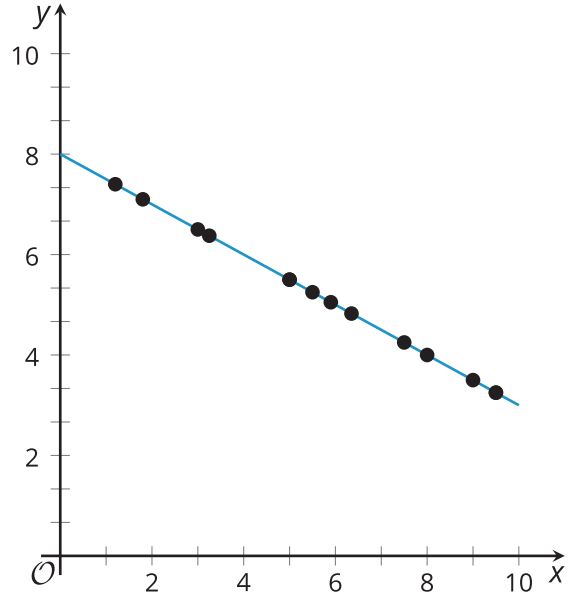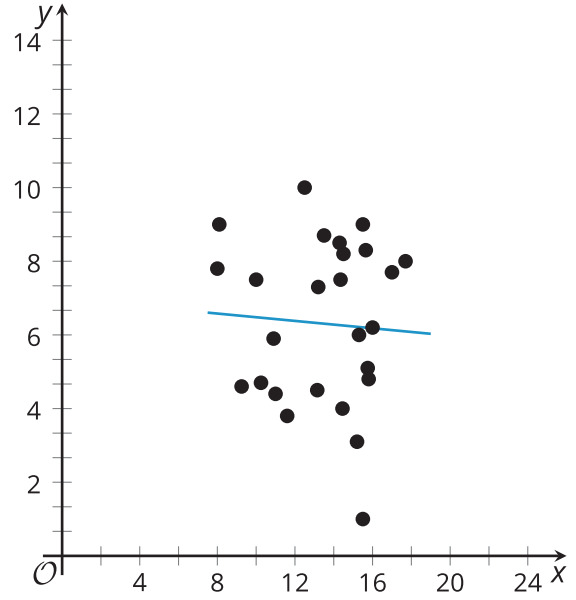
Student Task Statement

1. Take turns with your partner to match a scatter plot with a **correlation coefficient**.

2. For each match you find, explain to your partner how you know it's a match.

3. For each match your partner finds, listen carefully to their explanation. If you disagree, discuss your thinking and work to reach an agreement.

A

1. $r = -1$

2. $r = -0.95$

3. $r = -0.74$

4. $r = -0.06$

5. $r = 0.48$

6. $r = 0.65$

7. $r = 0.9$

8. $r = 1$

B

C

D

E

F

G

H