

4th Target: Writing Equations of Lines

____ / 22 pts Pass / Revisit

- a. Using **Slope-Intercept**, write the equation of the line if the slope is $-\frac{1}{2}$ and passes through the point (4, -3) (3 pts)

- b. Using **Point Slope** to write the equation of the line that passes through the point (-2, 4) and (3, -6) (4 pts)

- c. Using **either method**, write the equation of the line that passes through the point (6, -7) and (4, -1) (4 pts)

- d. Write the equation of the line **in standard form** passing through (5, 8) with slope $\frac{2}{3}$. (4 pts)

e. Write the equation of the line which passes through $(-10, 2)$ and is parallel to $4x + 5y - 23 = 0$ (5 pts)

f. Error analysis: Write what is wrong with what the following person did. (2 pts)

QUESTION: Find the equation of the line that passes through $(6, -8)$ with $m = \frac{-7}{3}$

RESPONSE: $-8 = \frac{-7}{3}(6) + b$

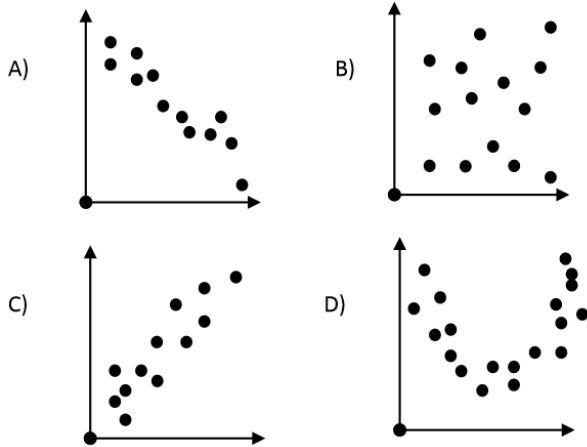
$$-8 = -14 + b$$

$$6 = b$$

5th Target: Scatter Plots

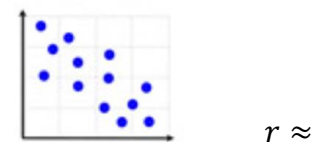
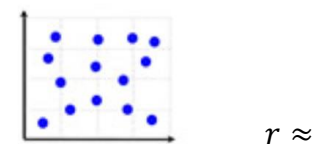
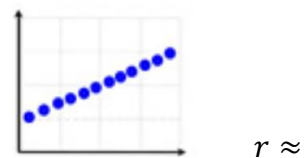
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a. Which graph represents a positive correlation?



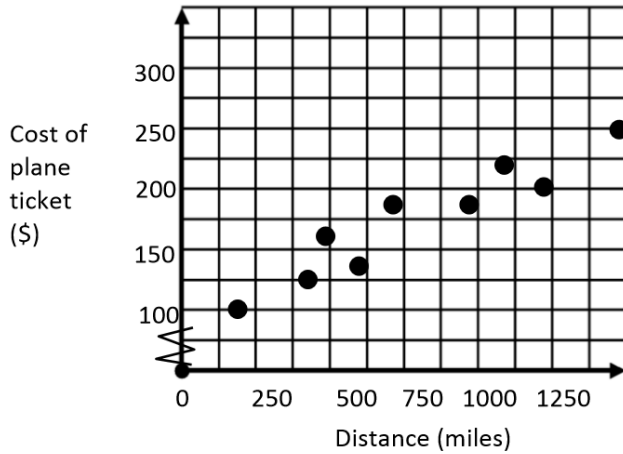
(1 pts)

b. Estimate the r values for the following scatterplots (3 pts)



C. The table below shows the cost of flying from San Francisco to various other cities in the United States. There is a relationship between the distance you are flying and the cost of your plane ticket. The data from the table is represented on the scatter plot.

Distance(miles)	600	374	1,240	725	150	1,100	950	1,500	500
Cost of the plane ticket (\$)	143	125	200	180	110	224	180	250	164



1) Draw a line of best fit and pick two good points from the table that are on your line. (1 pt)

2) What is the equation for the line of best fit? (4 pts)

3) Following this model, how much would a plane ticket cost to go 1,700 miles? (3 pts)

Extra Credit: Choose either problem 1 or problem 2 to do for extra credit. (May only choose one) (3 pts)

1. Find m so that the line through $(m - 1, m + 2)$ and $(4, -1)$ is parallel to the line through $(-3, m)$ and $(2, m + 3)$.
 2. Your pulse decreases at a constant rate when you cool down after a workout. 1 minute into your cool-down, your pulse is 165 beats per minute. 10 minutes into your cool-down, your pulse has decreased to $\frac{3}{5}$ of the 1-minute rate. Write a linear model to describe your pulse (p) after m minutes into the cool-down.
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