

HW: Worksheet/6-19

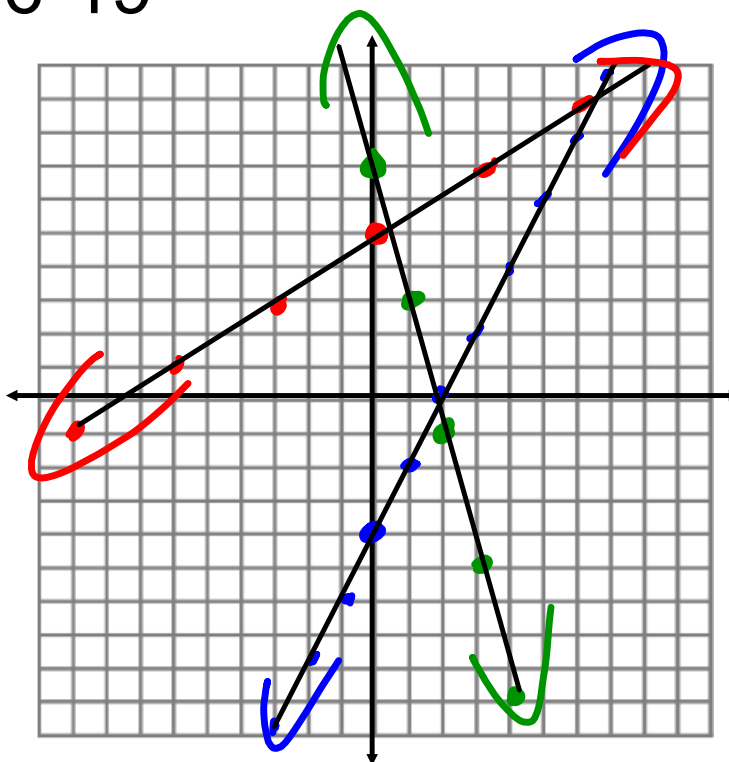
Warm up:

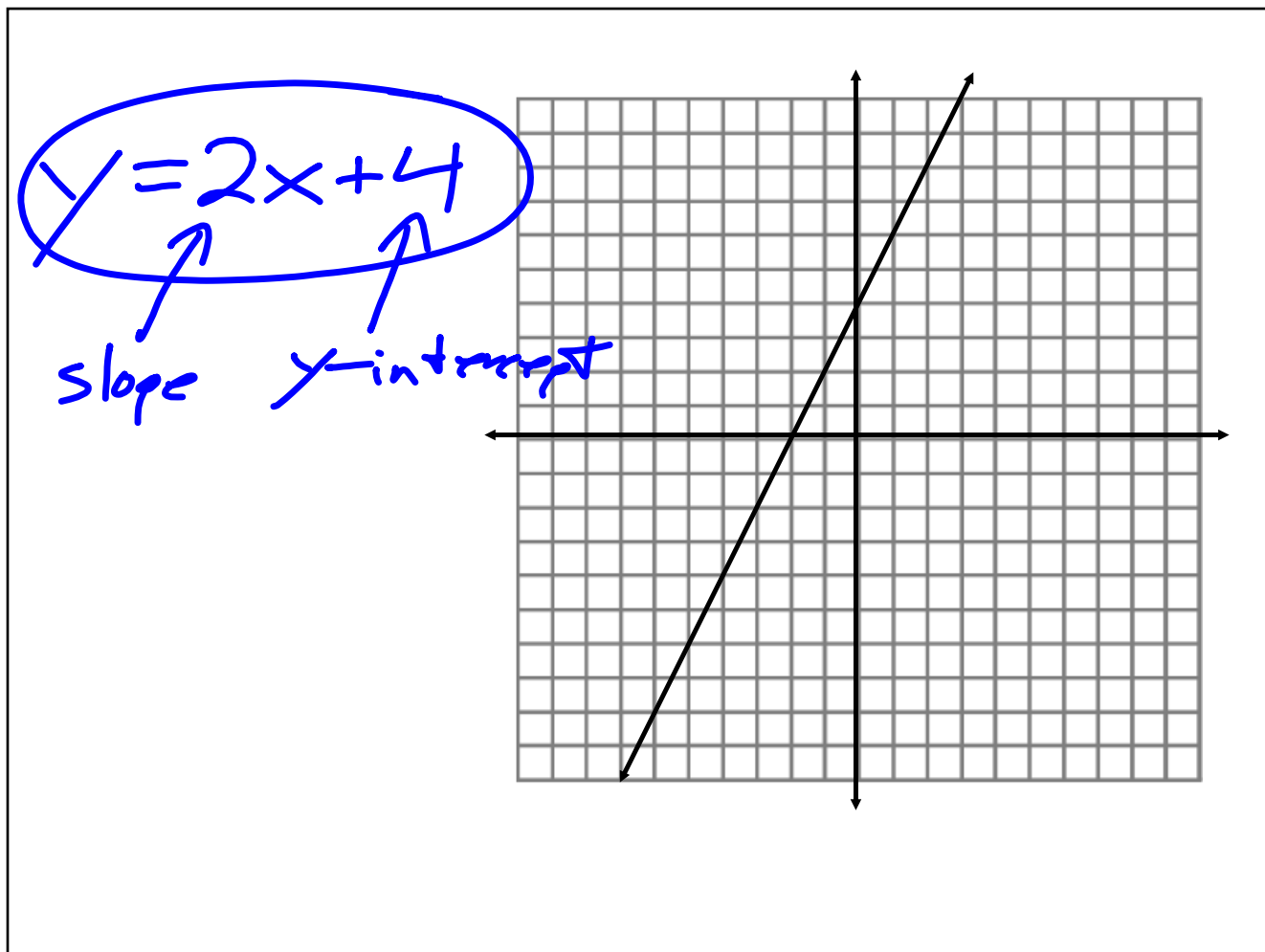
Graph.

1) $y = 2x - 4$

2) $y = -4x + 7$

3) $y = (2/3)x + 5$





Write an equation for each function.

$$y = -\frac{1}{3}x + 5$$

$$\frac{\Delta y}{\Delta x} = \frac{4 - (-1)}{4 - (-5)} = \frac{5}{9}$$

$$y = \frac{5}{9}x + b$$

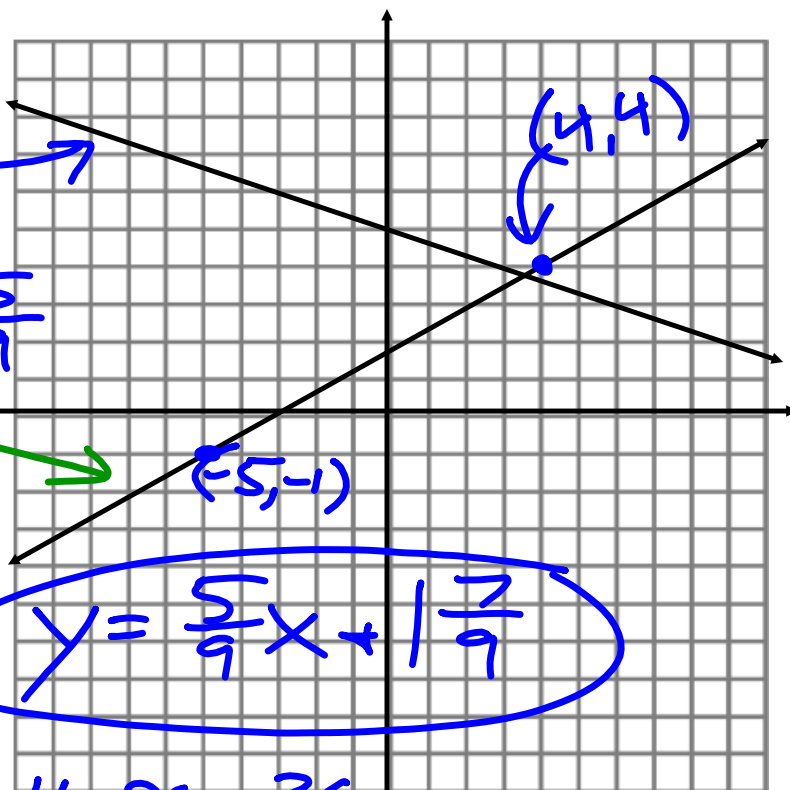
$$4 = \frac{5}{9}(4) + b$$

$$4 = \frac{20}{9} + b$$

$$-\frac{20}{9} - \frac{20}{9}$$

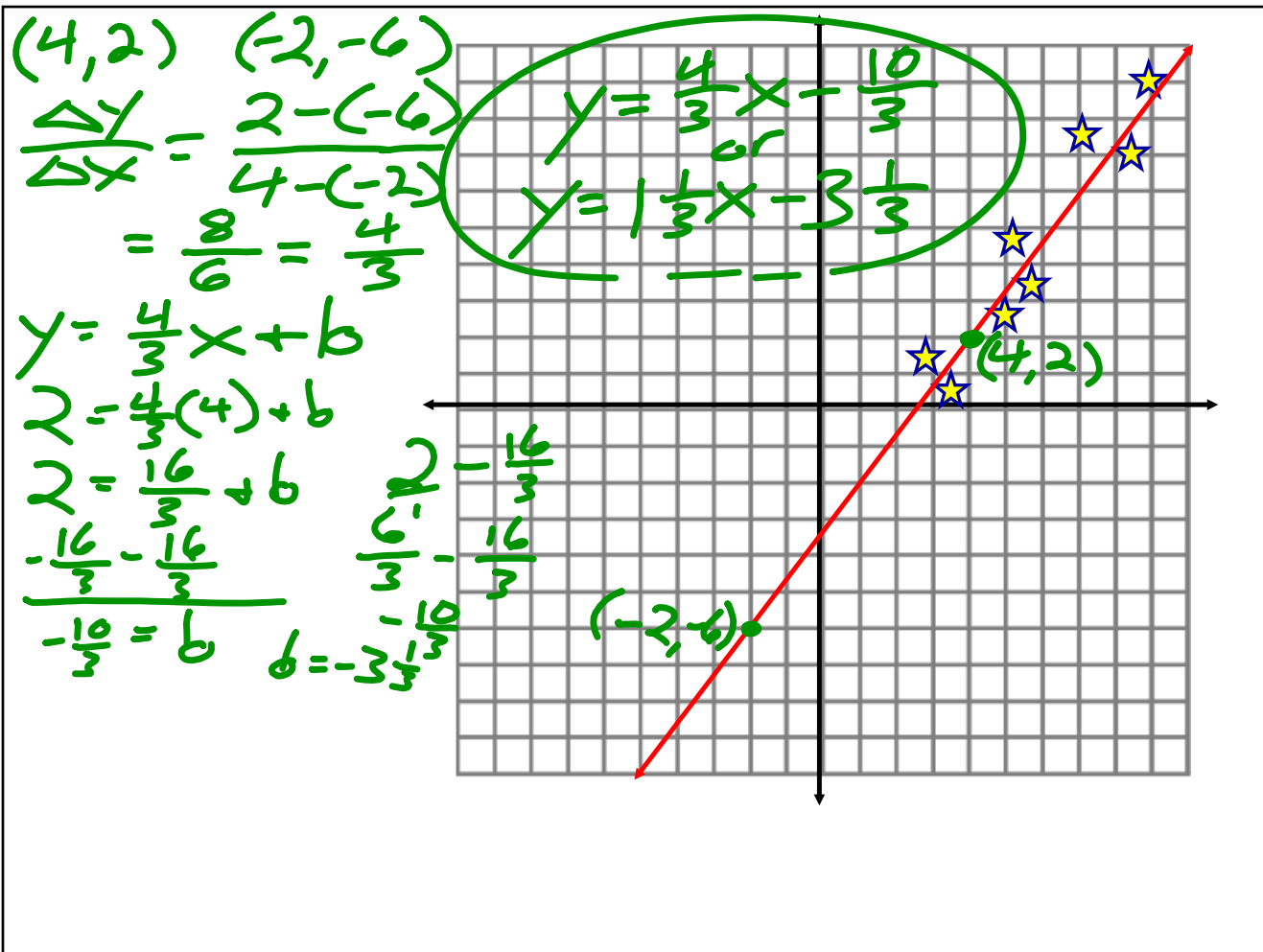
$$\frac{16}{9} = b$$

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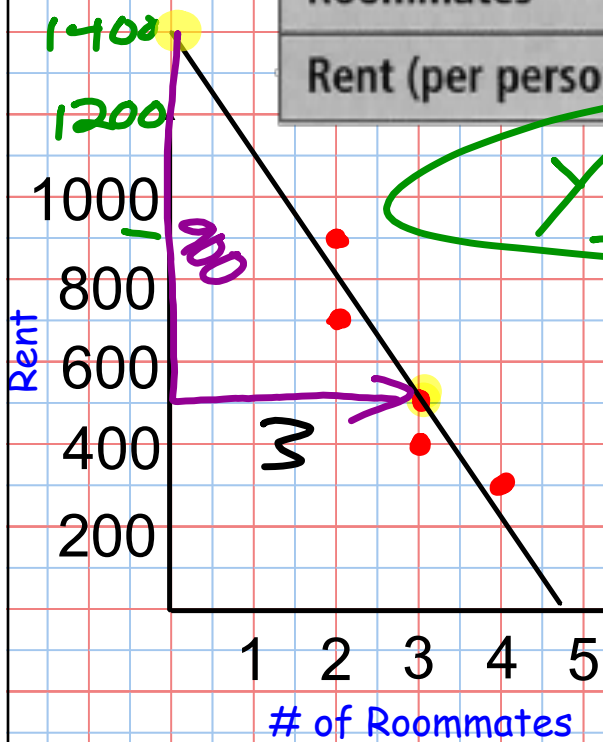
$$y = \frac{5}{9}x + 1\frac{7}{9}$$

$$\frac{4}{1} - \frac{20}{9} = \frac{36}{9} - \frac{20}{9} = \frac{16}{9}$$



Number of Roommates and Monthly Rent

Roommates	3	2	3	2	4
Rent (per person)	\$400	\$900	\$500	\$700	\$300



Draw scatter plots for the following sets of data and find the equation for the trend line.

Softball Game Results

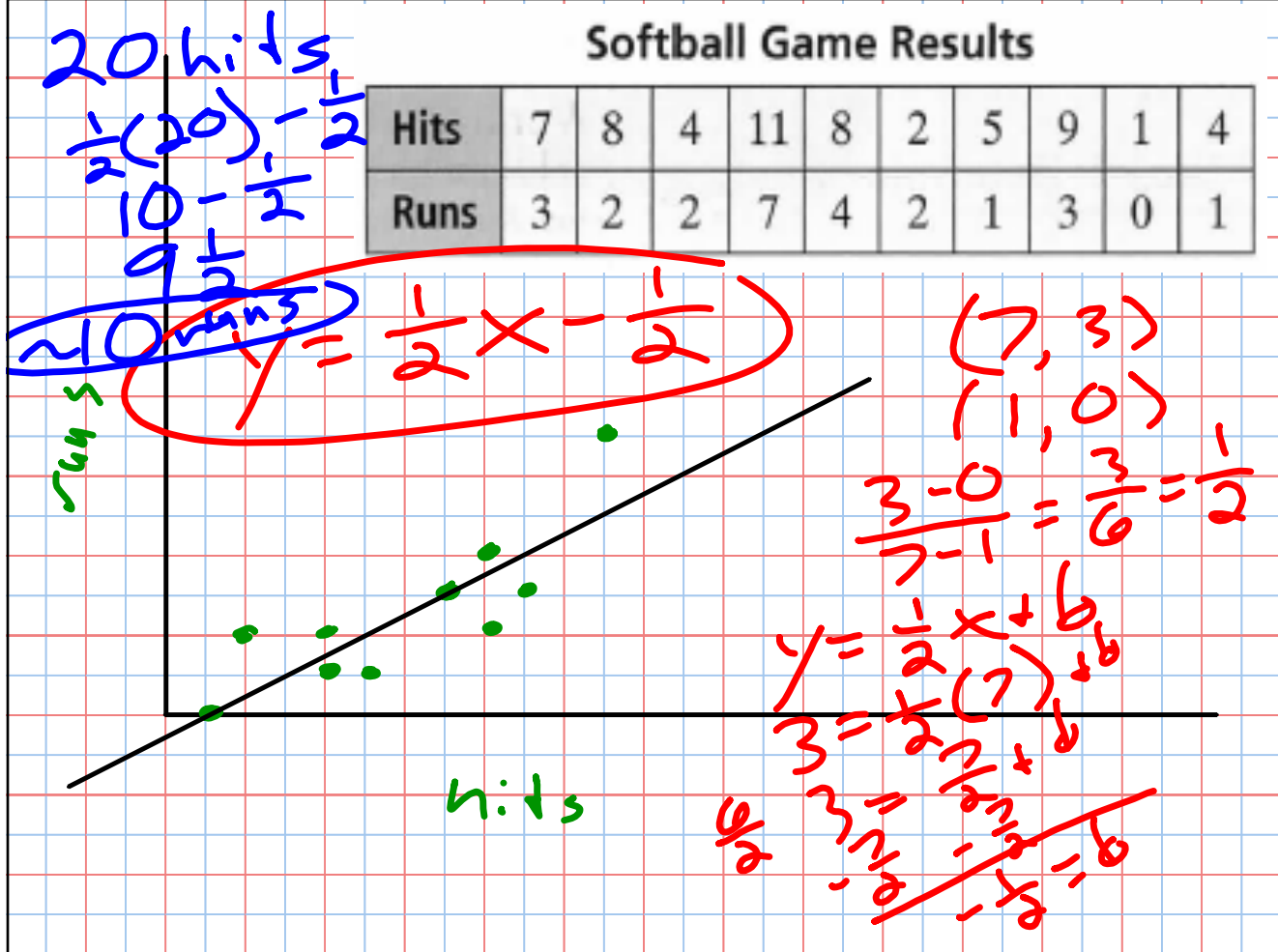
Hits	7	8	4	11	8	2	5	9	1	4
Runs	3	2	2	7	4	2	1	3	0	1

Farm Sizes in the United States (1940–2000)

Number of Farms (millions)	6.30	6.10	5.39	3.96	2.95	2.44	2.15	2.17
Average Size (acres)	157	175	216	297	373	426	460	434

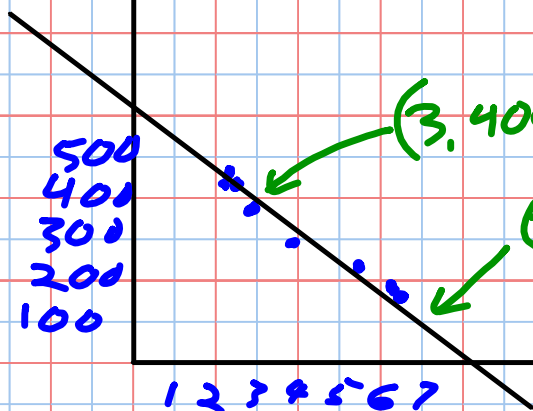
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Farm Sizes in the United States (1940-2000)

Number of Farms (millions) X	6.30	6.10	5.39	3.96	2.95	2.44	2.15	2.17
Average Size (acres) Y	157	175	216	297	373	426	460	434



$$\frac{400 - 100}{3 - 6} = \frac{300}{-3} = -\frac{300}{3} = -75$$

$$y = -75x + b$$

$$100 = -75(6) + b$$

$$100 = -525 + b$$

$$+525 \quad +525$$

$$625 = b$$

$$y = -75x + 625$$

Explain whether the scatter plot of the data for the following shows *positive*, *negative*, or *no* relationship.

1. rotations of a bicycle tire and distance traveled on the bicycle
2. number of pages printed by an inkjet printer and the amount of ink in the cartridge
3. age of a child and the child's shoe size
4. number of letters in a person's first name and the person's height
5. shots attempted and points made in a basketball game
6. year and winning time in the 100-meter dash in the Olympics
7. diameter of the trunk of a tree and the height of the tree
8. number of a bank account and the amount of money in the bank account
9. length of a taxi ride and the amount of the fare
10. daily high temperature and the amount of clothing a person wears
11. a person's age and a person's street address
12. outside temperature and the cost of air conditioning
13. the age of a car and how many people fit inside of it
14. inches of rainfall in the last 30 days and the water level in a reservoir
15. miles ridden on a bicycle tire and thickness of the tire tread
16. population of a U.S. state and the number of U.S. senators a state has