

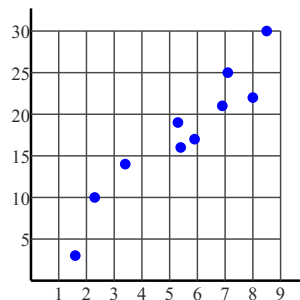
TWMM Extra Test Practice

Date _____ Period _____

Find the slope-intercept form of the equation of the line that best fits the data.

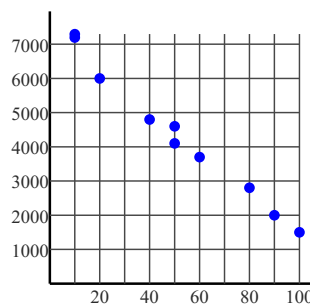
1)

X	Y	X	Y	X	Y
1.6	3	5.4	16	7.1	25
2.3	10	5.9	17	8	22
3.4	14	6.9	21	8.5	30
5.3	19				

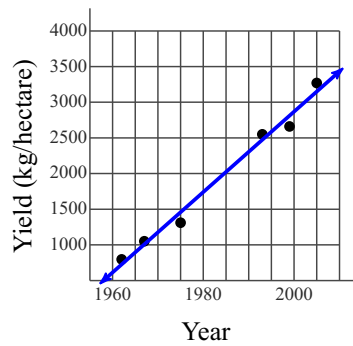


2)

X	Y	X	Y
10	7,200	50	4,600
10	7,300	60	3,700
20	6,000	80	2,800
40	4,800	90	2,000
50	4,100	100	1,500

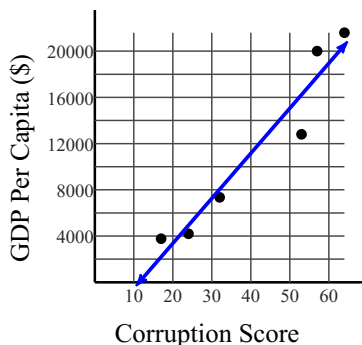


- 3) Scientists have steadily increased the amount of grain that farms can produce each year. The yield for farms in the Philippines is given by $y = 56.4x - 110000$ where x is the year and y is the grain yield in kilograms per hectare (kg/ha).



- What does the slope of the line represent?
- What does the y-intercept of this function represent?
- According to the model, what was the crop yield in 1980? Round your answer to the nearest whole number.
- The model indicates that a crop yield of 2200 kg/hectare was achieved in what year? Round your answer to the nearest year.

- 4) Economists have found that the amount of corruption in a country's government is correlated to the gross domestic product (GDP) per capita of that country. This can be modeled by $y = 390x - 4430$ where x is the corruption score and y is GDP per capita in dollars. Corruption scores range from 0 to 100 with 0 being highly corrupt and 100 being least corrupt.



- What does the slope of the line represent?
- What does the y-intercept of this function represent?
- According to the model, what would be the GDP per capita of a country with a corruption score of 39? Round your answer to the nearest dollar.
- A GDP per capita of \$13,000 corresponds to what corruption score, according to the model? Round your answer to the nearest whole number.

Answers to TWMM Extra Test Practice

- 1) $y = 3.0785x + 0.95314$
- 2) $y = -62.002x + 7562.1$
- 3) Slope: The increase in crop yield every year
Y-intercept: The crop yield in year zero
1,672 kg/ha, 1989
- 4) Slope: The increase in GDP per capita for every increase of one in corruption score
Y-intercept: The GDP per capita of a country with a corruption score of zero
\$10,780, 45