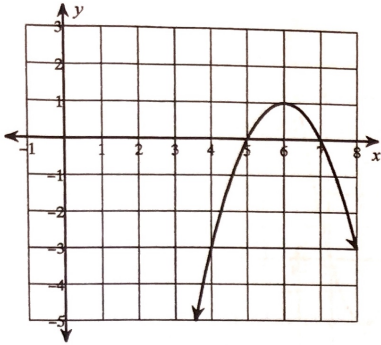


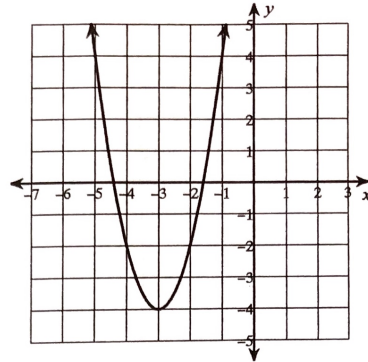
Use the information provided to write the VERTEX FORM equation of each parabola.

$$y = a(x - h)^2 + k$$

14)



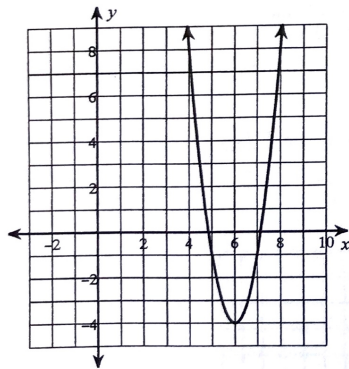
15)



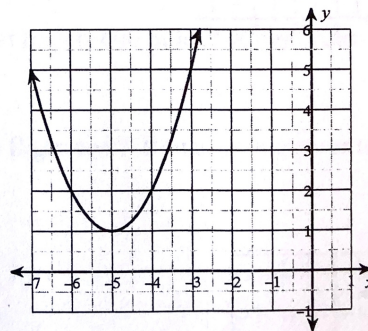
Use the information provided to write the STANDARD FORM equation of each parabola.

$$y = ax^2 + bx + c$$

16)

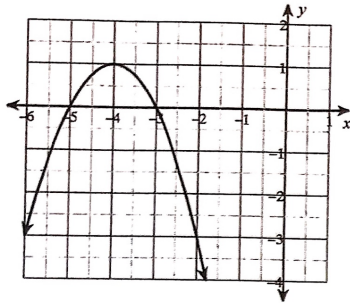


17)

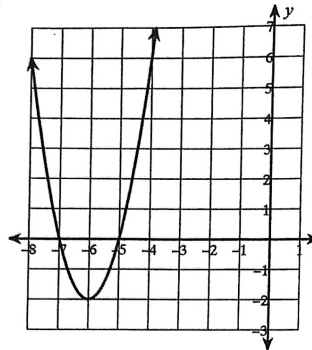


Use the information provided to write the INTERCEPT FORM equation of each parabola.
 $y = a(x - p)(x - q)$

18)

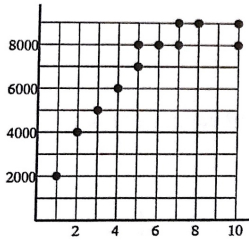


19)

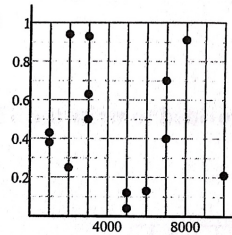


State if there appears to be a positive correlation, negative correlation, or no correlation.

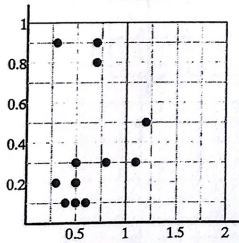
20)



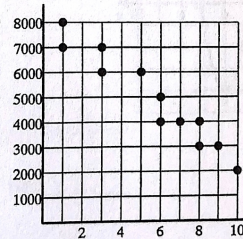
21)



22)



23)



USE DESMOS!!!

- a) Create a scatterplot of the data to determine if the relationship is linear or quadratic.
b) Write the equation of the function that best fits the data.

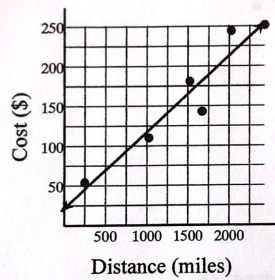
24)

X	Y	X	Y	X	Y
8	800	49	500	71	400
29	600	52	500	78	300
29	700	60	400	88	200
29	700	61	500	88	300
43	600	63	400		

25)

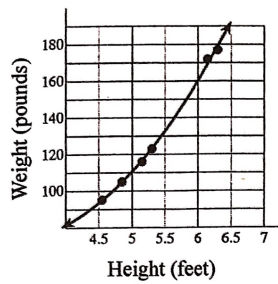
X	Y	X	Y	X	Y
10	1.8	60	7.8	100	7.7
20	4.2	70	8	100	7.9
30	5.1	70	8.1	100	8
40	6.7	80	8.2	100	8
50	7.2	90	8.2		

- 26) The cost of a flight is related to the length of the flight by $y = 0.0956x + 21.7$ where x is distance in miles y is cost in dollars.



- a) Using this model, what would be the cost of a flight that travels 600 miles? Round your answer to the nearest dollar.
- b) According to the model, how much would a 3550-mile flight cost? Round your answer to the nearest dollar.

- 27) The height and weight of adults can be related by the equation $y = 10.3x^2 - 63.3x + 170$ where x is height in feet and y is weight in pounds.



- a) Using this model, what would be the weight of someone who is 5.7 ft tall? Round your answer to the nearest tenth.
- b) According to the model, what would be the weight of someone who is 6 ft tall? Round your answer to the nearest tenth.