

Name:

HW: Adventures of Barbie Bungee

General formula for a line: $y = mx + b$

$$m = \text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

b = y-intercept

Problem: On a small island, a population of rabbits is growing. In the first year, there were 2 rabbits, the following year 4 rabbits, and the third year there were 6 rabbits.

a. How many rabbits will be on the island in the 4th year?

b. Place the first three data points in the table below

Year	Rabbit Population

c. What is the slope of your graph?

d. On the back of this sheet, graph your points and connect them with a line. What is the y-intercept?

e. What is the equation for your graph?

f. Assume that each rabbit eats one pound of carrots a year. That means that in the first year, the rabbits ate 2 pounds of carrots. If there is always 20 pounds of carrots on the island, what is the last year that there will be enough food for all the rabbits?