

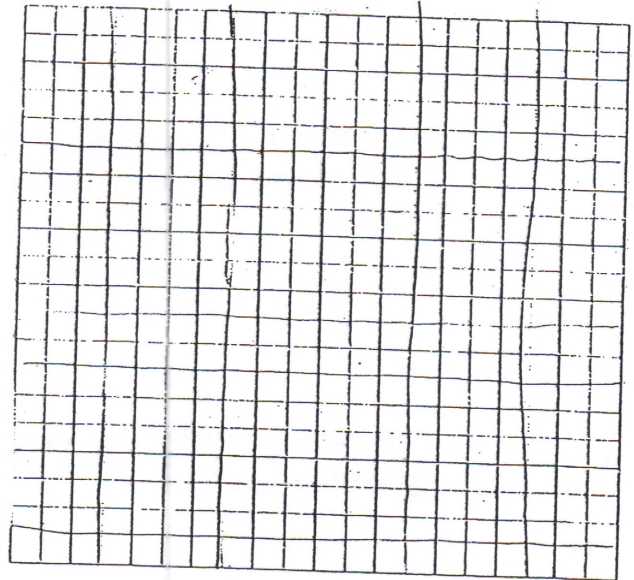
TYING THE KNOT

We will do an activity that compares the length of a string to the number of knots tied in the string. You will tie a knot in the string and then measure the length. You will continue to do this until you have 7 knots tied.

1. What do you predict will be the relationship between the length of the string and the number of knots tied in the string?

2. Conduct the experiment and collect the data in the table. Then graph the data on the graph paper.

# of knots	String length



3. What does the x variable represent?

4. What does the y variable represent?

5. Draw your line of best fit on the graph. What is the equation of your line?

6. What is the slope of your equation and what does it represent in this problem?

7. Is this a negative or positive correlation?

8. What is the y-intercept of your equation and what does it represent in this problem?

9. Based on your equation, what would you predict the length of the string to be with 20 knots? Explain how you got your answer.

10. Tie 20 knots and measure the string. How accurate was your prediction?

11. What was your specific role in helping your group while working on this project?

Extra credit: Give me an example where else you might see this kind of relationship.