Name: _____ Per _____ Date _____

1.2.2How can I predict the area?

Rug Design B

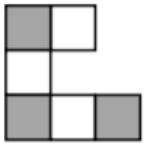


Figure 1

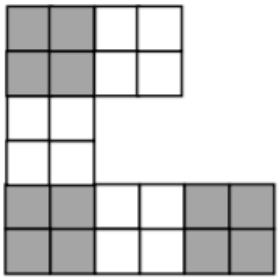


Figure 2

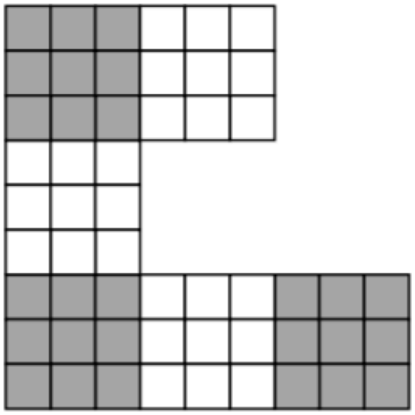


Figure 3

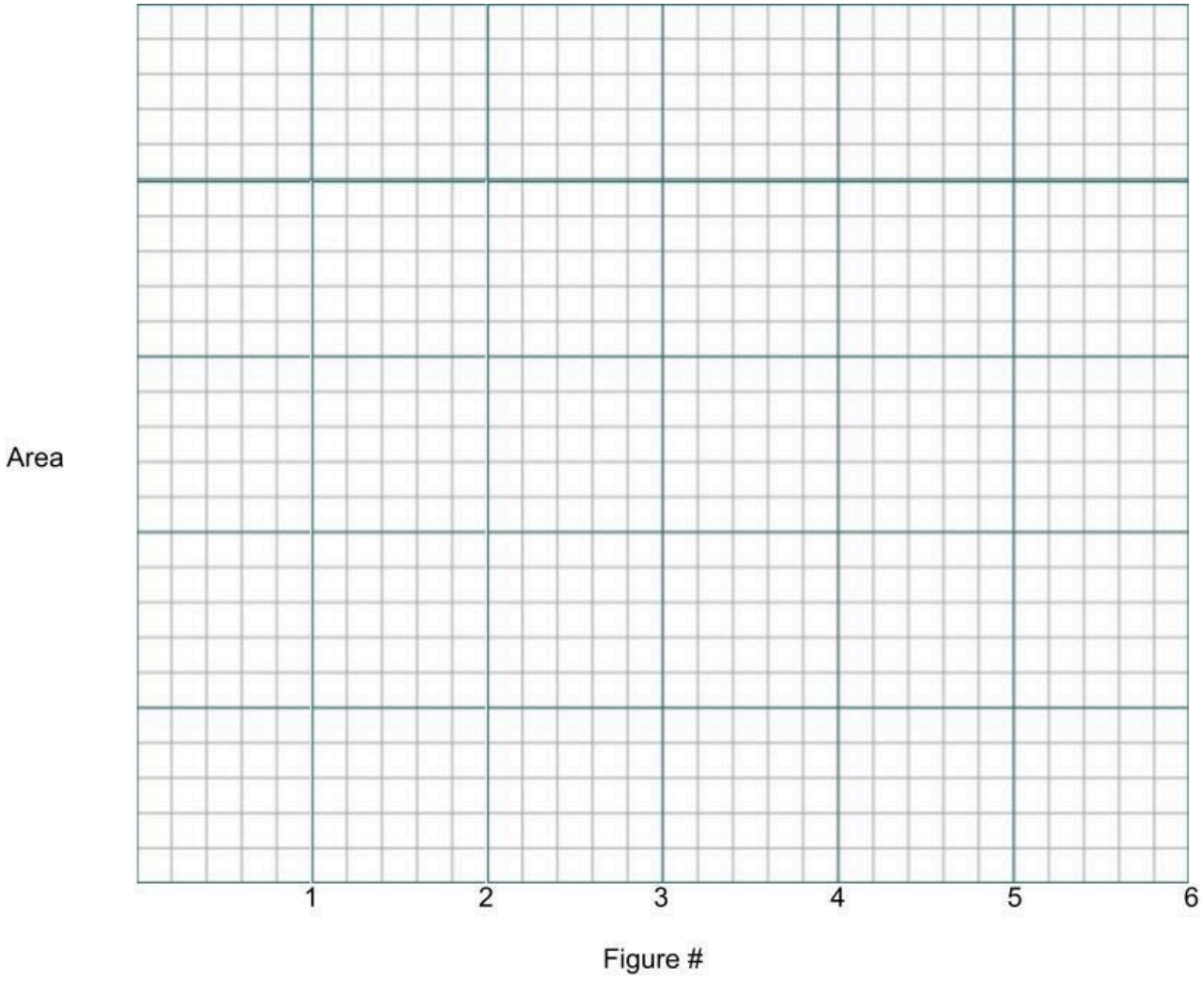
Investigate one of the rug designs. The "original" rug is shown in Figure 1, while Figures 2 and 3 are the next enlarged rugs of the series. **With your team, you will create a table and a graph, and then write equations for both the area and perimeter of your enlarging rug design.**

1. From your observations of Figures 1-3, **draw Figures 4 and 5 below**

2. **Complete the table for the Area.**

Figure #	Area
1	
2	
3	
4	
5	

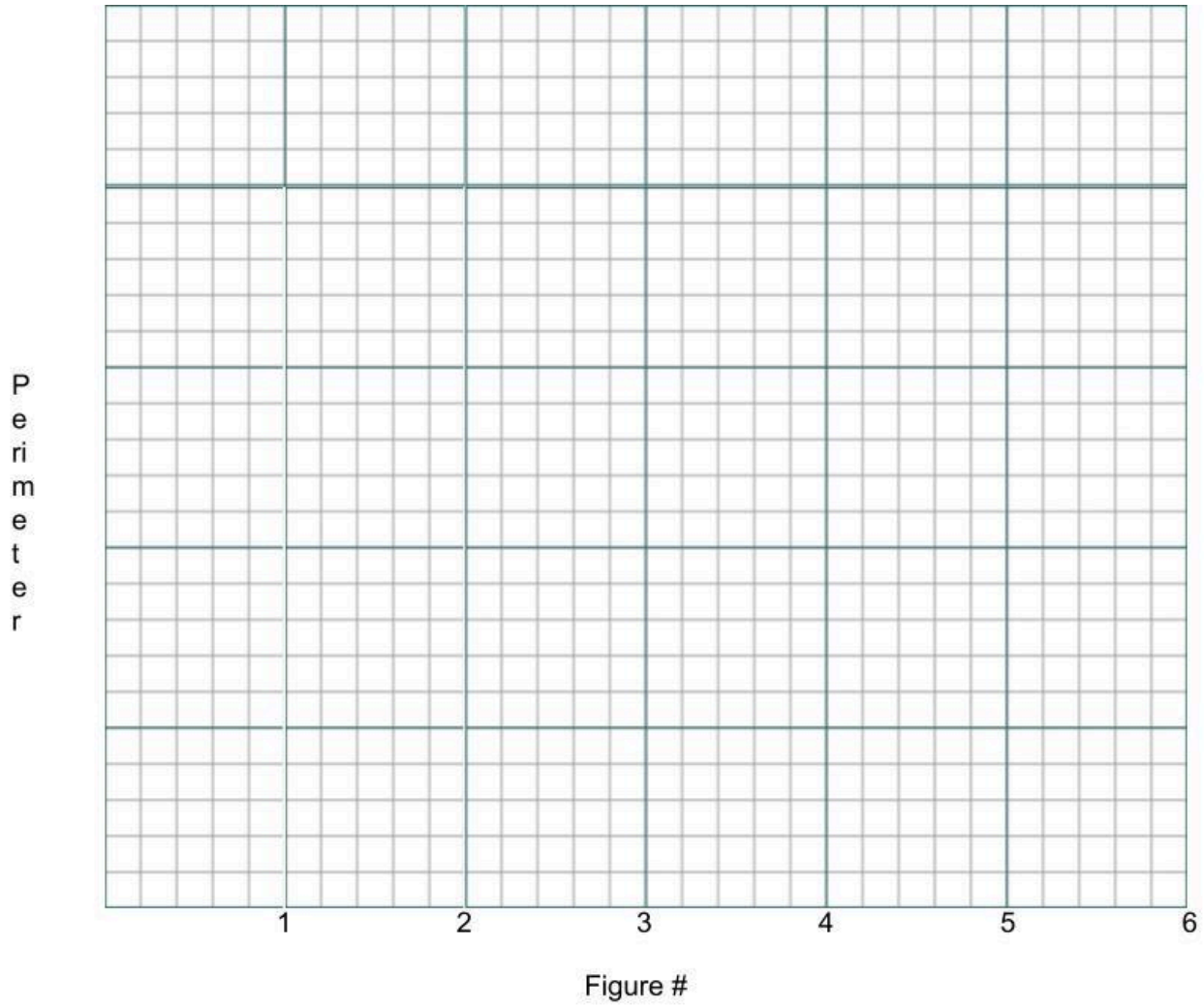
3. **Graph the Area table below**. Use coordinates (figure #, Area). *Number the Area axis accordingly.*



4. **Complete the table for the Perimeter.**

Figure #	Perimeter
1	
2	
3	
4	
5	

5. **Graph the Perimeter table below**. Use coordinates (figure #, Perimeter). *Number the Perimeter axis accordingly.*



6. Description of Figure 20. What will it look like? What are its area and perimeter?

7. What type of equations could we use to represent the **Area**? Linear? Quadratic? Exponential?

8. What type of equations could we use to represent the **Perimeter**? Linear? Quadratic? Exponential?

9. What is the equation for the **Area**?

10. What is the equation for the **Perimeter**?