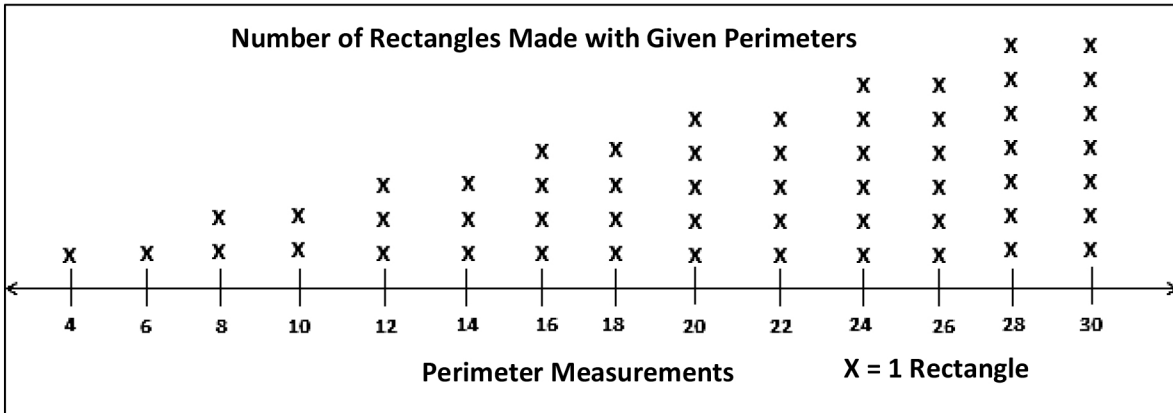Name _____ Date _____

1. The following line plot shows the number of rectangles a student made using square unit tiles. Use the line plot to answer the questions below.

Number of Rectangles Made with Given Perimeters

4	6	8	10	12	14	16	18	20	22	24	26	28	30
X	X	X	X	X	X	X	X	X	X	X	X	X	X
		X	X	X	X	X	X	X	X	X	X	X	X
				X	X	X	X	X	X	X	X	X	X
						X	X	X	X	X	X	X	X
								X	X	X	X	X	X
										X	X	X	X
												X	X

Perimeter Measurements   X = 1 Rectangle

a. Why are all of the perimeter measurements even? Do all rectangles have even perimeters?

b. Explain the pattern in the line plot. What types of side lengths make this pattern possible?

c. How many X's would you draw for a perimeter of 32? Explain your answer.

2. Luis uses unit square tiles to build a rectangle with a perimeter of 24 inches. Does knowing this help him find the number of rectangles he can build with an area of 24 square inches? Why or why not?

3. Esperanza makes a rectangle with a piece of string. She says the perimeter of her rectangle is 33 centimeters. Explain how it's possible for her rectangle to have an odd perimeter.

Answer Key

1. a. Explanations will vary; no

    b. No; whole number side lengths

    c. 8; explanations will vary.

2. No; explanations will vary.

3. Explanations will vary.