Math Live – *Displaying Data*: Activity Sheet

Grade: 6   **Strand**: Statistics and Probability (Data Analysis)   **Outcome:** 1, 3

Frequency Diagrams and Line Plots

1. As part of her health classes, Ms. Boyd had her Grade 5 students record their height in centimeters in September and June. In June, they calculated the difference between these two heights to see how much they had grown.

Here is each student's growth:

|		
Sarah – 6 cm	Bob – 4 cm	Luke – 2 cm
Bill – 3 cm	Alyson – 7 cm	Dana – 6 cm
Corey – 2 cm	Rejean – 5 cm	Lori – 5 cm
Chance – 4 cm	Mandy – 6 cm	Jerod – 4 cm
Benji – 6 cm	Norm – 8 cm	Marti – 7 cm
Susan – 5 cm	Eric – 2 cm	Vito – 3 cm
Tom – 5 cm	Diane – 5 cm	Toria – 6 cm
Ira – 6 cm	Whitney – 5 cm	Juan – 7 cm

a) Use the chart below to create a frequency diagram to display the growth data from the Grade 5 students in Mrs. Boyd's class. The first one is done for you.

Growth in Centimetres	Tallies	Frequency

Total:

b) Use the grid below to create a line plot to display the growth data from the Grade 5 students in Mrs. Boyd's class. The first one is done for you.

Title:_____

X						
X						
X						

2
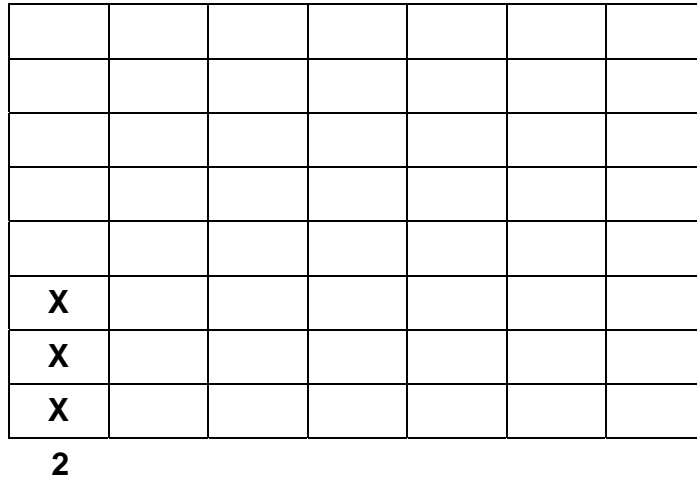
c) What conclusion could you make from the data displayed in the frequency diagram and the line plot?

d) What is the difference between the greatest increase in growth and the least increase in growth in the class?
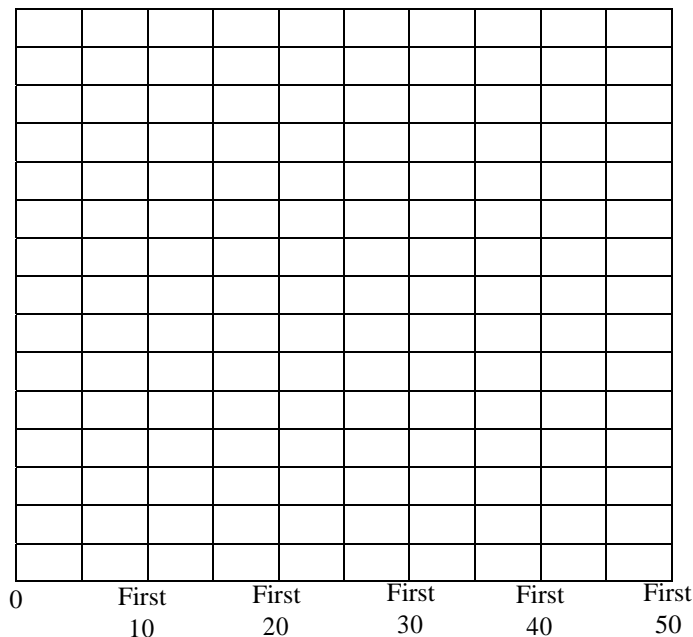
Broken-line Graph

2. Kyle conducted an experiment to find out how often an even number comes up when you toss a standard die (six-sided die with the numbers 1 to 6). He decided to roll the die 50 times and he predicted that he would get about 25 even numbers. The results of his experiment are displayed in table below.

Rolling a Standard Die – Even Numbers

Number of Rolls	Number of Even Numbers
First 10	7
First 20	11
First 30	18
First 40	22
First 50	28

a) Display this data in a broken-line graph.

Title:_____

| 0 | First 10 | First 20 | First 30 | First 40 | First 50 |

b) Compare the data on the graph with Kyle's prediction.

_____

c) What conclusions could you make from the data on the graph?

Math Live – *Displaying Data*: Activity Sheet Answer Key

1. As part of her health classes, Ms. Boyd had her Grade 5 students record their height in centimeters in September and June. In June, they calculated the difference between these two heights to see how much they had grown.

Here is each student's growth:

Sarah – 6 cm	Bob – 4 cm	Luke – 2 cm
Bill – 3 cm	Alyson – 7 cm	Dana – 6 cm
Corey – 2 cm	Rejean – 5 cm	Lori – 5 cm
Chance – 4 cm	Mandy – 6 cm	Jerod – 4 cm
Benji – 6 cm	Norm – 8 cm	Marti – 7 cm
Susan – 5 cm	Eric – 2 cm	Vito – 3 cm
Tom – 5 cm	Diane – 5 cm	Toria – 6 cm
Ira – 6 cm	Whitney – 5 cm	Juan – 7 cm

    a) Use the chart below to create a frequency diagram to display the growth data from the Grade 5 students in Mrs. Boyd's class. The first one is done for you.

| Growth in Centimetres	Tallies	Frequency
2	III	3
3	II	2
4	III	3
5	IIII I	6
6	IIII I	6
7	III	3
8	I	1
	Total:	24

Broken-line Graph

2. Kyle conducted an experiment to find out how often an even number comes up when you toss a standard die (six-sided die with the numbers 1 to 6). He decided to roll the die 50 times and he predicted that he would get about 25 even numbers. The results of his experiment are displayed in table below.

Rolling a Standard Die – Even Numbers

Number of Rolls	Number of Even Numbers
First 10	7
First 20	11
First 30	18
First 40	22
First 50	28

a) Display this data in a broken-line graph.

Title: Tossing a Die – Even Numbers
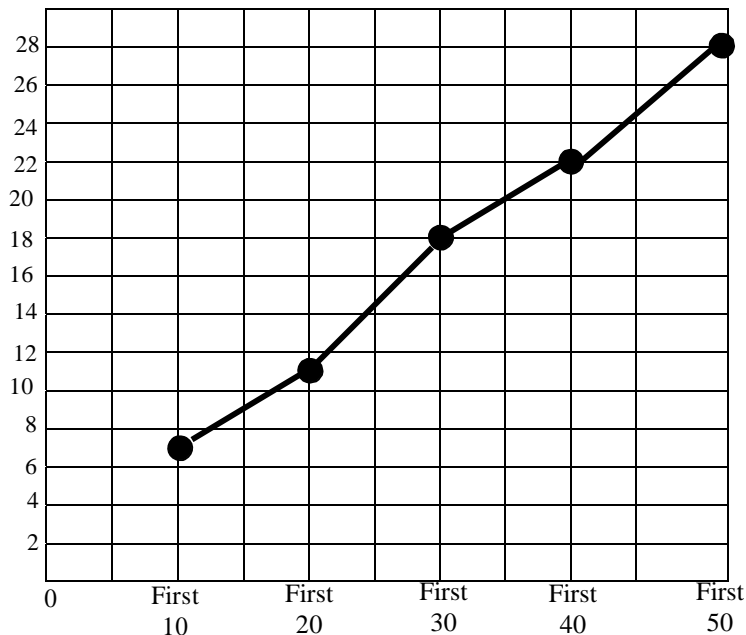
b) Compare the data on the graph with Kyle's prediction.

The data on the graph is close to Kyle's prediction. He predicted that 25 even numbers would come up and there were 28 even numbers.

c) What conclusions could you make from the data on the graph?

Answers may vary. The number of even numbers that come up is always close to one half of the total number of times that the die is tossed. As the number of tosses increases, the number of even numbers increases at a consistent rate with minor variations.