Name _____ Date _____
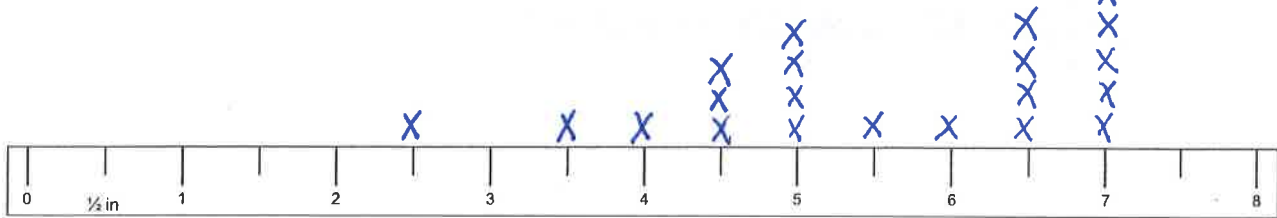
1. Estimate the length of your pencil to the nearest inch. _____

2. Using a ruler, measure your pencil strip to the nearest $\frac{1}{2}$ inch, and mark the measurement with an X above the ruler below. Construct a line plot of your classmates' pencil measurements.
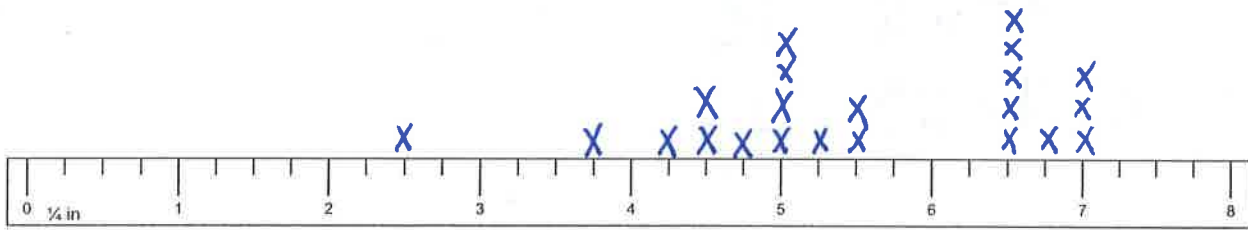
Length of String

X = 1 string

Length of String (in inches)

3. Using a ruler, measure your pencil strip to the nearest $\frac{1}{4}$ inch, and mark the measurement with an X above the ruler below. Construct a line plot of your classmates' pencil measurements.

Class String Lengths
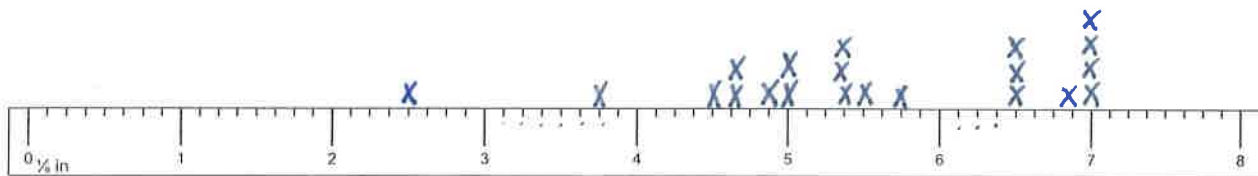

Length of String (in in.)

X = 1 string

4. Using a ruler, measure your pencil strip to the nearest $\frac{1}{8}$ inch, and mark the measurement with an X above the ruler below. Construct a line plot of your classmates' pencil measurements.

Class String Lengths

Length of String (in inches)

X = 1 string

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MATH

Lesson 1: Measure and compare pencil lengths to the nearest $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$ of an inch, and analyze the data through line plots.

23

5. Use all three of your line plots to complete the following:

   a. Compare the three plots, and write one sentence that describes how the plots are alike and one sentence that describes how they are different.

   There should have been the same number of xs

   With each line plot, the unit of measurement changed so different results happened.

   b. What is the difference between the measurements of the longest and shortest pencils on each of the three line plots?

   Range

   $a. \quad 7 - 2\frac{1}{2} = 4\frac{1}{2}$

   $b. \quad 7 - 2\frac{2}{4} = 4\frac{2}{4}$

   $c. \quad 7 - 2\frac{4}{8} = 4\frac{4}{8}$

   c. Write a sentence describing how you could create a more precise ruler to measure your pencil strip.

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Lesson 1:   Measure and compare pencil lengths to the nearest $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$ of an inch, and analyze the data through line plots.

24