Objective: Represent Measurement Data with Line Plots

Count by 7's to 70

Watch me, when my thumbs up, count up, hands together, pause, thumbs down, count down.

4 X 7 =

What is the value of 4 sevens? Count by sevens if you aren't sure.

4 X 7 = 28

6 X 7 =

What is the value of 6 sevens? Count by sevens if you aren't sure.

6 X 7 = 42

8 X 7 =

What is the value of 6 sevens? Count by sevens if you aren't sure.

8 X 7 = 56

Dividing

What is 21 ÷ 7 ? Count by 7 if you are unsure.

$$21 ÷ 7 = 3$$

What is 35 ÷ 7 ? Count by 7 if you are unsure.

$$35 ÷ 7 = 5$$

What is 63 ÷ 7 ? Count by 7 if you are unsure.

$$63 ÷ 7 = 9$$

Count by 8's to 80

Watch me, when my thumbs up, count up, hands together, pause, thumbs down, count down.

3 X 8 =

What is the value of 3 eights? Count by eights if you aren't sure.

3 X 8 = 24

6 X 8 =

What is the value of 6 eights? Count by eights if you aren't sure.

6 X 8 = 48

8 X 8 =

What is the value of 8 eights? Count by eights if you aren't sure.

8 X 8 = 64

Dividing

What is 24 ÷ 8 ? Count by 8 if you are unsure.

$$24 ÷ 8 = 3$$

What is 56 ÷ 8 ? Count by 8 if you are unsure.

$$56 ÷ 8 = 7$$

What is 72 ÷ 8 ? Count by 8 if you are unsure.

$$72 ÷ 8 = 9$$

Count by halves to 12 With Me On My White board.

Count by halves to 12 halves as I write. Please do not count faster than I can write.

Look at 2/2. Say 2 halves as a whole number.

Count by fourths to 12 fourths as I write. Please do not count faster than I can write.

Look at 4/4. Say 4 fourths as a whole number

Application Problem

The chart shows the lengths of straws measured in Mr. Han's class.

a. How many straws were measured? Explain how you know.

b. What is the smallest measurement on the chart? The greatest?

c. Were the straws measured to the nearest inch? How do you know?

Straw Lengths (in Inches)				
3	4	$4\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{3}{4}$
$3\frac{3}{4}$	$4\frac{1}{2}$	$3\frac{1}{4}$	4	$4\frac{3}{4}$
$4\frac{1}{4}$	5	3	$3\frac{1}{2}$	$4\frac{1}{2}$
$4\frac{1}{2}$	4	$3\frac{1}{4}$	5	$4\frac{1}{4}$

a) 20 straws were measured. I know this because there are 20 measurements on the chart, and each represents 1 straw.

b) The smallest measurement is $2\frac{3}{4}$ inches. The greatest measurement is 5 inches.

c) No, they weren't measured to the nearest inch because there are also quarter-inches and half-inches.

Let's draw a line plot using the data from the application problem.

What scale should we use for the first measurement?

Look at the data, what is the smallest measurement?

The first number on the scale should be …..

2 ¾ inches

What do you think will be the last measurement in the line plot?

Talk with your table group and come up with an answer….

Give your elbow partner a fist bump if you all decided the last measurement is …. wait…..

5 inches

Turn and talk to your partner. Look over the data in the chart. How do you know what interval we should count by to create our scale?

Count by whole inches?

The data has numbers with whole inches, half inches, and quarter inches.

We should count by quarter inches!

Let's do it! Use the template and a ruler to make our graph.

How many tick marks do we need to draw all together?

10

We need to partition our number line into equal intervals and label our scale. How can we use our ruler to create equal intervals?

Remember start your scale with the smallest number, 2 ¾, then make a tick mark at each quarter inch until you have made 10 tick marks. Then label your tick marks, 3, 3 ¼, 3 ½ and so on until you reach 5.
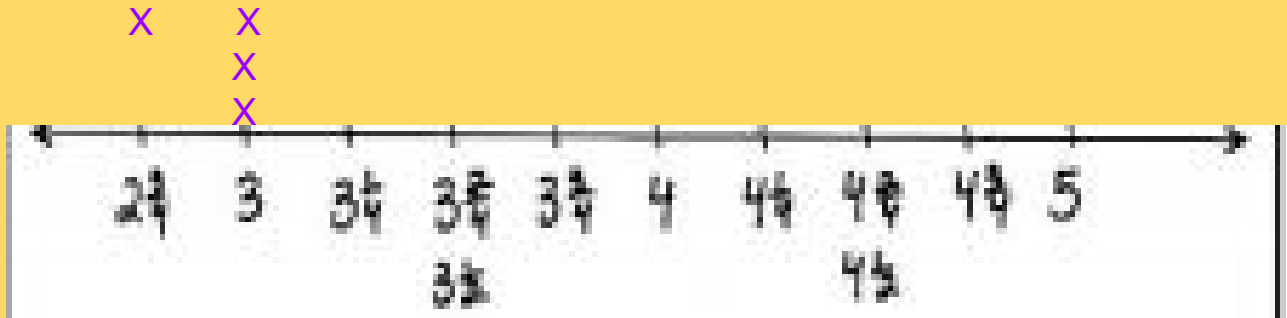
Your scale should look like this -

Now we can plot the data. Use an X to mark each straw. Make sure and cross off the data on the chart as you record it.

Now give the line plot a title that tells what it shows.

What does each X on the plot mean? We need to add a key so our readers know.

Finally, what unit did we use to measure the straws? We need to add that word.

Lengths of Different Straws in Mr. Han's Class

X   X
     X
     X

$2\frac{1}{4}$ 3 $3\frac{1}{4}$ $3\frac{3}{8}$ $3\frac{3}{4}$ 4 $4\frac{1}{4}$ $4\frac{1}{2}$ $4\frac{3}{4}$ 5

$3\frac{1}{2}$ $4\frac{1}{2}$

Inches

X = 1 Straw

BRAIN BREAK

Problem set - [12 minute timer](#)

Debrief

How has learning about fractions helped you to create line plots?

Why is it important to create a scale before partitioning a number line?

Pattern Sheet - Multiply by 6

TIMER