G3-M6-Lesson 5

1. Samantha measures 3 crayons to the nearest inch, $\frac{1}{2}$ inch, and $\frac{1}{4}$ inch. She records the measurements in the chart below.

Crayon (color)	Measured to the Nearest Inch	Measured to the Nearest $\frac{1}{2}$ Inch	Measured to the Nearest $\frac{1}{4}$ Inch
Orange	4	$4\frac{1}{2}$	$4\frac{3}{4}$
Pink	2	$2\frac{1}{2}$	$2\frac{1}{2}$
Blue	6	6	$5\frac{3}{4}$

a. Which crayon is the longest? *blue*

It measures $5\frac{3}{4}$ inches.

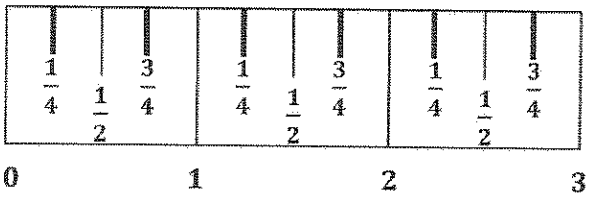
The blue crayon was measured 3 times, but the most precise measurement is $5\frac{3}{4}$ inches.

b. Look carefully at Samantha's data. Which crayon most likely needs to be measured again? Explain how you know.

The orange crayon most likely needs to be measured again. Samantha recorded 4 inches as the measurement to the nearest inch and $4\frac{3}{4}$ inches as the measurement to the nearest $\frac{1}{4}$ inch. Those measurements don't make sense. If the crayon really measures close to $4\frac{3}{4}$ inches, then the measurement to the nearest inch would be 5 inches, not 4 inches.

$4\frac{3}{4}$ inches is only $\frac{1}{4}$ inch away from 5 inches. It doesn't make sense for the same crayon to have measurements of $4\frac{3}{4}$ inches and 4 inches.

2. Evelyn marks a 3-inch paper strip into equal parts as shown below.



I can start at the edge of the paper strip and label it 0 inches. Then I can label the rest of the whole inches. I can label the mark halfway between each whole inch as $\frac{1}{2}$ inch.

a. Label the whole and half inches on the paper strip.

b. Estimate to draw the $\frac{1}{4}$ inch marks on the paper strip. Then, fill in the blanks below.

2 inches are equal to __4__ half inches.

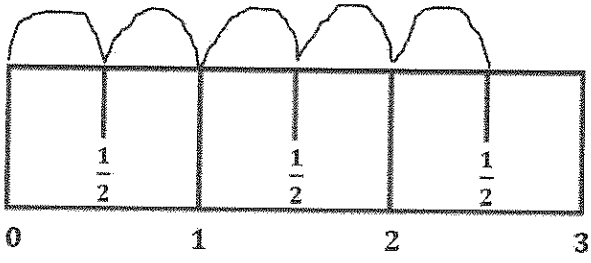
2 inches are equal to __8__ quarter inches.

2 half inches are equal to __4__ quarter inches.

4 quarter inches are equal to __2__ half inches.

I can estimate to partition each $\frac{1}{2}$ inch into 2 equal parts to mark and label the $\frac{1}{4}$ inches. Then I can use the strip to help me fill in the blanks.

3. Samantha says her pink crayon measures $2\frac{1}{2}$ inches. Daniel says that's the same as 5 half inches. Explain how they are both correct.



I can see in my drawing that there are 5 half inches in $2\frac{1}{2}$ inches.

They are both correct because there are 2 half inches in each inch, so $2\frac{1}{2}$ inches is equal to 5 half inches.