

On the back of the points, lines, and planes scavenger hunt from yesterday, copy the following chart. Then get a ruler and measure each length, filling out the chart.

Measure the width of a student desk in inches	$23\frac{7}{16}$ $23\frac{1}{2}$	Measure the distance between your eyes in centimeters	
Measure the height of a student desk in feet	$2\frac{1}{2}$ ft $2\frac{3}{4}$ ft 2 ft	Measure the length of your arm in inches	
Measure the height of the classroom door frame in feet	6.8	Measure the circumference of your head in centimeters	
Estimate the length of the classroom end-to-end in feet	30 37 $2\frac{7}{34}$	Estimate the height of the classroom ceiling in yards	$3\frac{1}{2}$

~~RULERS~~ being passed out

LESSON 1-2 Linear Measure

We have:

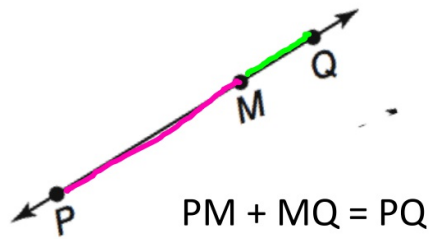
Identified and modeled points, lines and planes.
Measured segments.

Today we will:

Calculate with measures to find unknown lengths and solve equations.

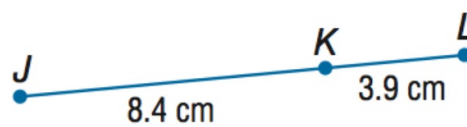
Betweenness

If a point is between two other points on a line, the whole segment is the sum of the two smaller segments.

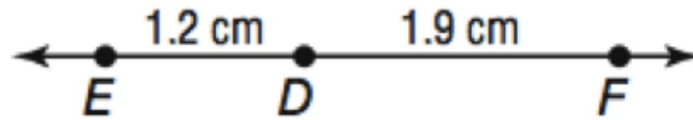


Find JL . Assume that the figure is not drawn to scale.

$$\begin{array}{r} 1 \\ 8.4 \\ + 3.9 \\ \hline 12.3 \text{ cm} \end{array}$$



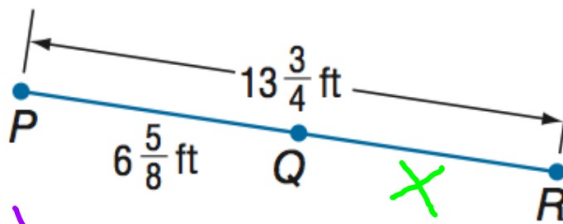
Find EF .



$$\begin{array}{r} 1.2 \\ + 1.9 \\ \hline 3.1 \text{ cm} \end{array}$$

Find QR . Assume that the figure is not drawn to scale.

$$\frac{3}{4} = \frac{6}{8}$$

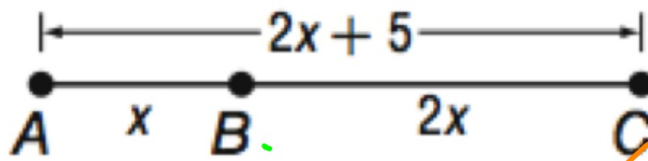


$$13 \frac{3}{4} = 6 \frac{5}{8} + X$$

$$- 6 \frac{5}{8} \quad - 6 \frac{5}{8}$$

$$7 \frac{1}{8} = X$$

Find x and AC.



$$AC = 2(5) + 5$$

$$10 + 5$$

$$AC = 15$$

$$x + 2x = 2x + 5$$

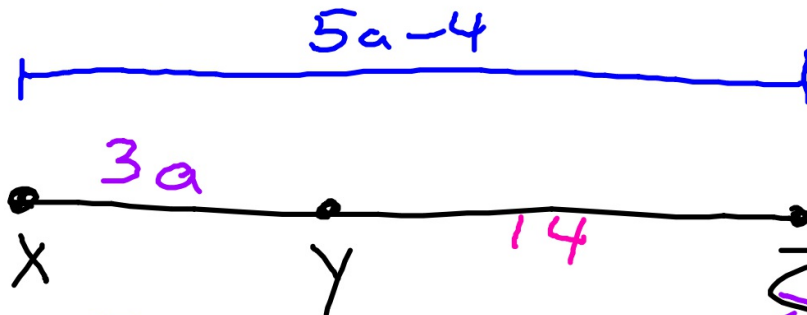
$$3x = 2x + 5$$
$$\begin{array}{r} -2x \\ \hline x = 5 \end{array}$$

$$x = 5$$

Draw

Find the value of a and XY if (Y is between X and Z ,

$XY = 3a$, $XZ = 5a - 4$, and $YZ = 14$.)



$$3a + 14 = 5a - 4$$
$$\begin{array}{r} -3a \\ \hline 14 = 2a - 4 \end{array}$$

$$18 = 2a$$

$$\frac{14}{2} = \frac{2a - 4}{2}$$
$$7 = 2a$$

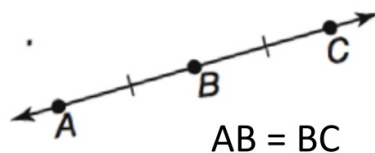
Find the value of x and RS if S is between R and T .

$$RS = 2x, ST = 5x + 4, \text{ and } RT = 32$$

Congruent segments

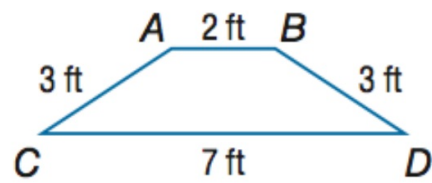
If two segments have the same length, they are called **congruent segments**. This is indicated by slashes in a picture.

AB and BC are congruent segments.



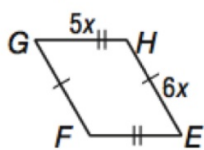
Determine whether each pair of segments is congruent.

$\overline{AC}, \overline{BD}$

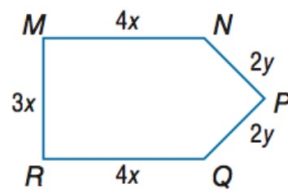


Determine whether each pair of segments is congruent.

$\overline{GF}, \overline{FE}$



$\overline{MN}, \overline{RQ}$



$\overline{EH}, \overline{FG}$

