Geometry 11/9

Warm Up IXL 8th Grade T.3

1-2 Linear Measure

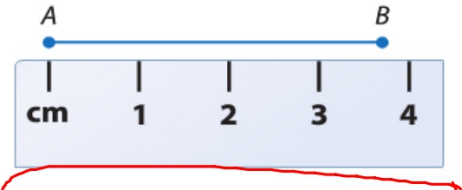
I can measure segments and calculate with measures

Line Segment or Segment

is made up of two endpoints and all the points in between

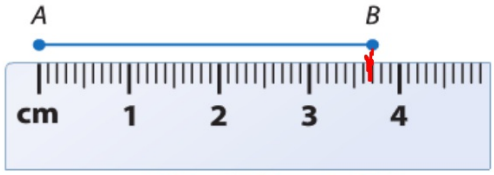
Ex. 1 Find the length of $\overline{AB}$ using each ruler

A.



≈ 3.8 cm

B.

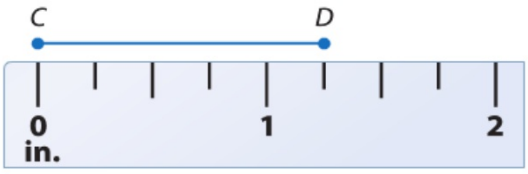


3.7 cm

I can measure segments and calculate with measures

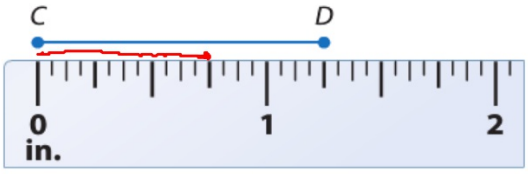
Ex. 2 Find the length of $\overline{CD}$ using each ruler

A.



$1\frac{1}{4}''$

B.

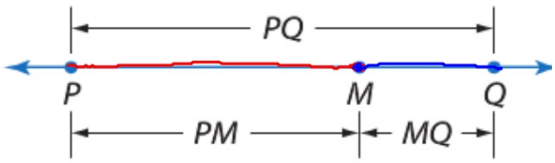


$1\frac{1}{4}''$

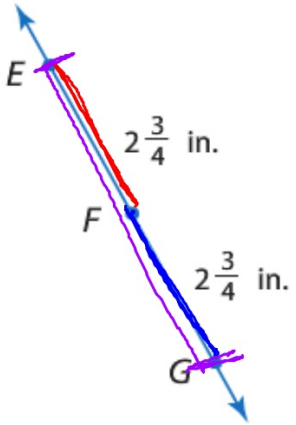
I can measure segments and calculate with measures

Betweenness of Points

Point M is **between** points P and Q if and only if P, Q, and M are collinear and $PM + MQ = PQ$.



Ex. 3 **Find EG. Assume that the figure is not drawn to scale.**



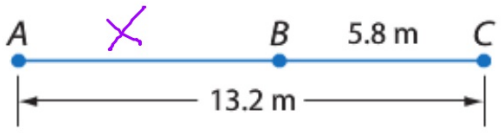
$$2\frac{3}{4} + 2\frac{3}{4}$$

$$4\left(\frac{3}{4} + \frac{3}{4}\right)$$

$$4\frac{6}{4} = 5\frac{2}{4} = 5\tfrac{1}{2}''$$

I can measure segments and calculate with measures

Ex. 4 **Find AB. Assume that the figure is not drawn to scale.**

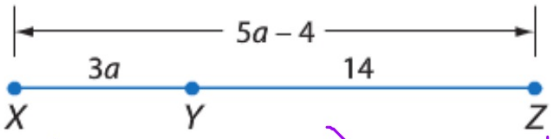


$X + 5.8 = 13.2$
$-5.8 \quad -5.8$

$\boxed{X = 7.4\text{m}}$

Ex. 5

ALGEBRA **Find the value of a and XY if Y is between X and Z, $XY = 3a$, $XZ = 5a - 4$, and $YZ = 14$.**



$\overline{XY} = 3a$
$= 3(9)$

$\boxed{\overline{XY} = 27}$

$3a + 14 = 5a - 4$
$-5a \quad -5a$

$-2a + 14 = -4$
$-14 \quad -14$

$\frac{-2a}{-2} = \frac{-18}{-2}$

$\boxed{a = 9}$

I can measure segments and calculate with measures

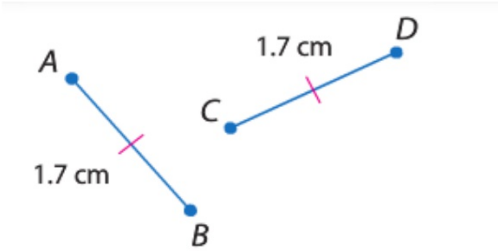
Congruent Segments

segments that have the same measure

Symbols $\cong$ is read *is congruent to*. Red slashes on the figure also indicate congruence.

Example $\overline{AB} \cong \overline{CD}$

$\overleftrightarrow{XY}$ $\overline{XY}$



Ex. 6 Name the congruent segments in the sign shown

$\overline{CD} \cong \overline{FE}$

$\overline{AB} \cong \overline{AG}$ $\cancel{\overline{GA}}$

$\overline{BC} \cong \overline{GF}$ $\cancel{\overline{FG}}$

I can measure segments and calculate with measures

ICA Pg 18 #2-30ev

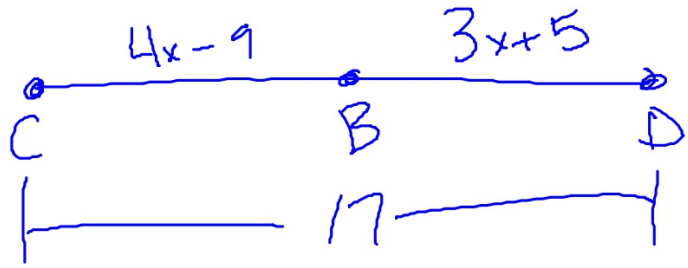
Hmwk IXL Geo B.2-B.3

B is between C & D

$\overline{CB} = 4x - 9$

$\overline{BD} = 3x + 5$

$\overline{CD} = 17$



$$4x - 9 + 3x + 5 = 17$$

$$7x - 4 = 17$$
$$+4 \quad +4$$

$$\frac{7x}{7} = \frac{21}{7}$$

$$x = 3$$