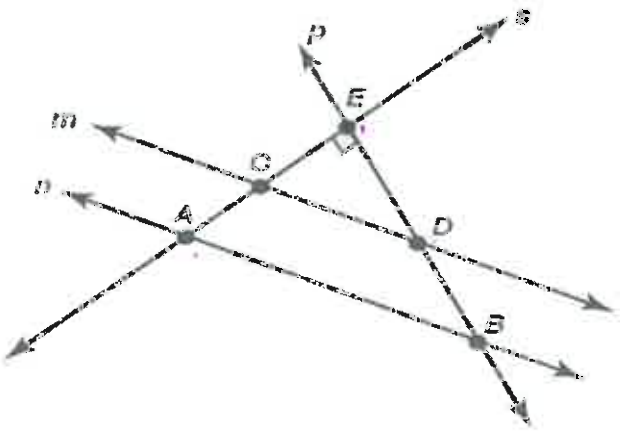
Geometry R – Mrs. Cowen
Unit 1 – Day 1 Notes v2

Name_____
Date_____

Points & Lines



1. Name **3** points.

- C
- E
- D

2. Are the points you named in #1 **Collinear**? Why?

No, they are not on the same line.

3. Name the **line** that passes through points A and E 3 different ways.

line ACE or $\overleftrightarrow{ACE}$
line AC, AE or $\overleftrightarrow{AC}$, $\overleftrightarrow{AE}$
line S

4. Name the **line segment** that contains point D in its interior.

$\overline{EB}$ or $\overline{EDB}$

5. Name the **ray** that has endpoint D and passes though point E.

$\overrightarrow{DE}$

6. Name two lines that appear to be **parallel** and explain why?

lines m and n
$\overleftrightarrow{CD}$ and $\overleftrightarrow{AB}$
They don't intersect.

7. Name the two lines that are **perpendicular** and explain why?

form a right ∠.

lines P and S
$\overleftrightarrow{AE}$ and $\overleftrightarrow{EB}$
They form a right ∠. There is a box indicating this.

$\overline{FG}$ refers to a segment
FG refers to the measure or length.

Congruent Vs. Equal

$\cong$ = congruent (same)

equal = have the same length.

1. Four siblings have made the following claims about the segments drawn above.

Sibling #1 claims $\overline{FG} \cong \overline{HI}$

Sibling #2 claims $FG = HI$

Sibling #3 claims $FG \cong HI$

Sibling #4 claims $\overline{FG} = \overline{HI}$

Only 2 of the siblings made a correct claim. Which 2 are they and why are they correct?

Siblings 1 & 2 are correct

FG=HI because the lengths of the segments have the same value

$\overline{FG} \cong \overline{HI}$ The segments are identical in size

2. Is it possible for $\overleftrightarrow{FG} \cong \overleftrightarrow{HI}$ or for $\overrightarrow{FG} \cong \overrightarrow{HI}$? Explain your reasoning.

lines rays

No, lines & rays have infinite lengths so they can't have the same size.

Sketching, Drawing, Constructing

1. To "**Sketch**" means to make a picture using only a pencil. Sketch and label a segment $\overline{CD}$, such that $\overline{CD} \cong \overline{AB}$.

Freehand

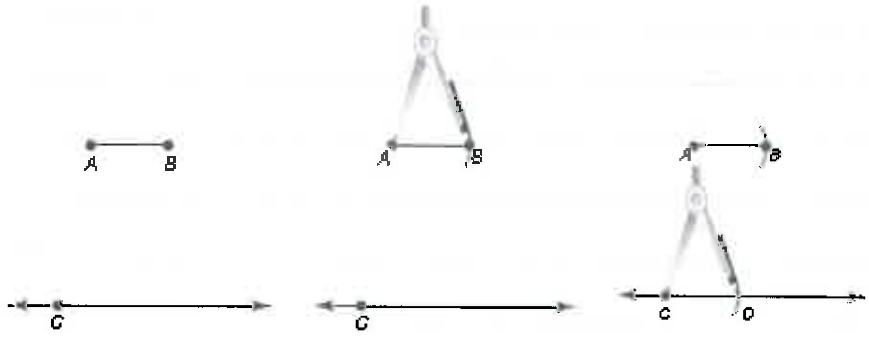
2. To "**Draw**" means to make a picture using mathematical tools that measure, such as a ruler or protractor. Draw and label a segment $\overline{CD}$, such that $\overline{CD} \cong \overline{AB}$.

use a ruler AB ≈ 2.9 cm

≈ about

3. To "**Construct**" means to make a picture using only a compass and straight edge.

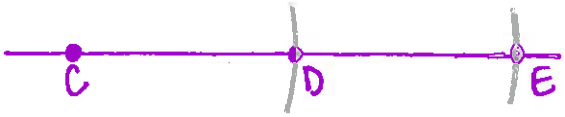
You can duplicate a line segment by constructing an exact copy of the original line segment.



Line segment CD is a duplicate of line segment AB.

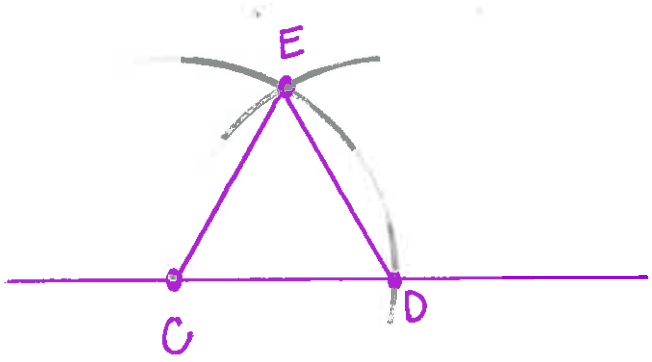
Construct and label a segment $\overline{CD}$, such that $\overline{CD} \cong \overline{AB}$.

$\overline{CE} = 2\,\overline{AB}$



4. Which picture do you believe to be the most accurate? In other words, in which picture is segment CD precisely the same size as segment AB? Why?

Compass is the most accurate. you can measure the exact length of $\overline{AB}$ and duplicate it.

5. Construct and label an equilateral triangle using $\overline{CD}$ as the lengths of its sides.

all sides are the same