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Segments and Angles using Geometer's Sketch pad

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Generic Lesson Plan Template

You should submit this form in addition to any computer generated files/documents/models to your group folder on Angel. Please create a .zip file and upload the group of files as a single archive.

| |
|---|
| Name: Ijeoma B Okafor |
| Grade level(s)/Subject taught: Mathematics 10 th Graders |
| Objectives: How do we Find the length of a segment and the measure of an angle Using Geometers Sketchpad. |

Please provide a rich **one-page, single-spaced**, description or a *vision* of your best thinking on a way or ways you might teach the planned lesson. (approximately ½ page for the teacher role, ½ page for the student role). Also, construct a tentative rubric that you might use with your students (see example)

Items to include in your lesson plan: (Choose your discipline/concepts from your own area).

1. Write the Mathematical Concept or “key idea” that modeling will be used to teach: (e.g. Students use mathematical modeling/ multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships)

Key Idea 4: Modeling and Multiple Representation: Student uses Mathematical modeling/multiple representation to provide a means presenting, interpreting, communicating, and connecting mathematical information and relationships.

and/or...

- 1b. Write the Science Concept or “key idea” that modeling will be used to teach: (e.g. Organisms maintain a dynamic equilibrium that sustains life).

| |
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| |
|--|

Materials:

“...a rich **one-page, single-spaced**, description or a *vision* of your best thinking...”

Prompts:

1. How will you assess the prior knowledge of the student?
2. How will you begin the lesson?
3. What are the teacher and students doing every 5-10 minutes? (Teacher Actions and Student Actions)
4. How will you assess the learning for the lesson?

Using _____ I plan on having my students...
(software / modeling package(s))

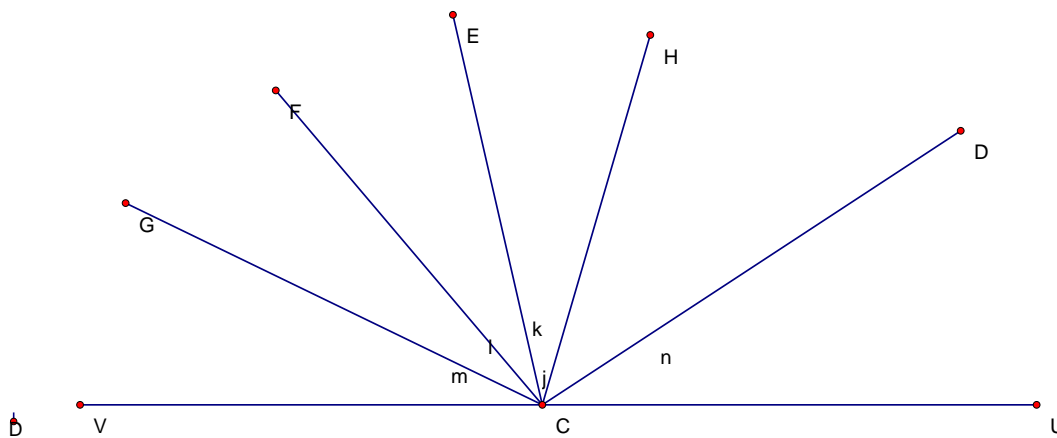
****Example:** "I was thinking about beginning the class on [modeling X] by using the overhea

Lesson Plan
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Essential question: How do find the length of a line segment and measuring the angles using Geometers Sketchpad.

Prior Knowledge: Using a ruler and protractor, student should be able to measure a line segment and the angles formed.

New Lesson: Using Geometers Sketchpad, construct a line segment with angle

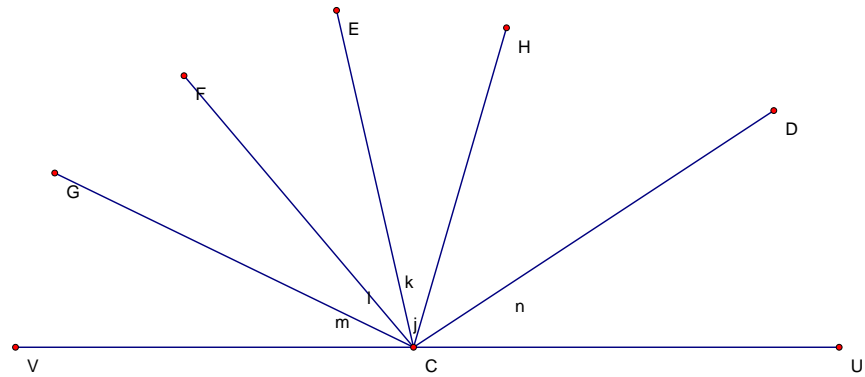


Step 2

Using GSP, we will now measure the line segments.

$m \overline{CU} = 7.77 \text{ cm}$
 $n = 7.86 \text{ cm}$
 $j = 6.07 \text{ cm}$
 $k = 6.29 \text{ cm}$
 $l = 6.47 \text{ cm}$
 $m = 7.25 \text{ cm}$
 $m \overline{CV} = 7.24 \text{ cm}$

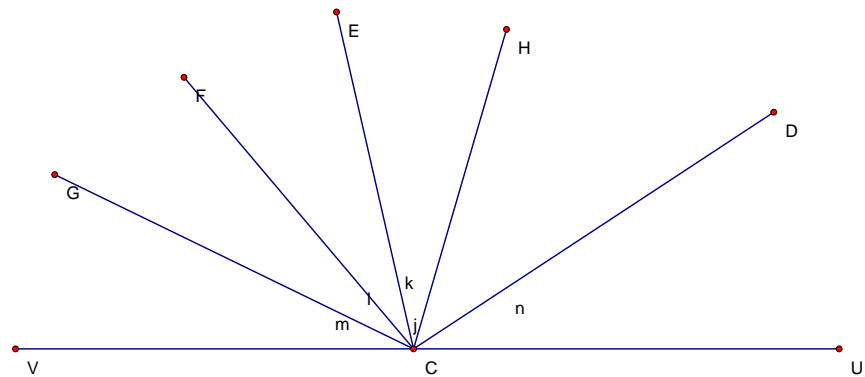
click on each line segment, and go to measure and click on length.



Now to measure the angles.

$m \angle UCD = 33.26^\circ$
 $m \angle DCH = 40.40^\circ$
 $m \angle HCE = 29.09^\circ$
 $m \angle ECF = 27.35^\circ$
 $m \angle FCG = 23.94^\circ$
 $m \angle GCV = 25.96^\circ$

click on three consecutive angle, and go to measure and click on angle.



$$m\angle UCD = 33.26^\circ$$

$$m\angle DCH = 40.40^\circ$$

$$m\angle HCE = 29.09^\circ$$

$$m\angle ECF = 27.35^\circ$$

$$m\angle FCG = 23.94^\circ$$

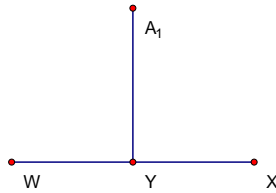
$$m\angle GCV = 25.96^\circ$$

$$33.26 + 40.4 + 29.09 + 27.35 + 23.94 + 25.96 = 180.00$$

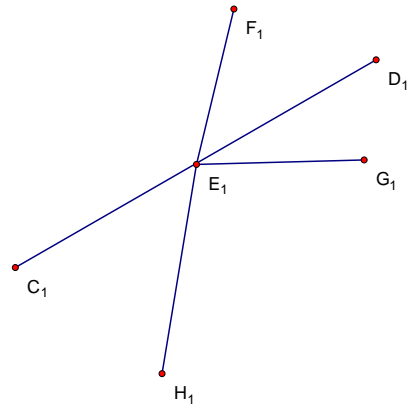
Now to show that the measure of the angles in a straight line adds up to 180..

Practice Ex.

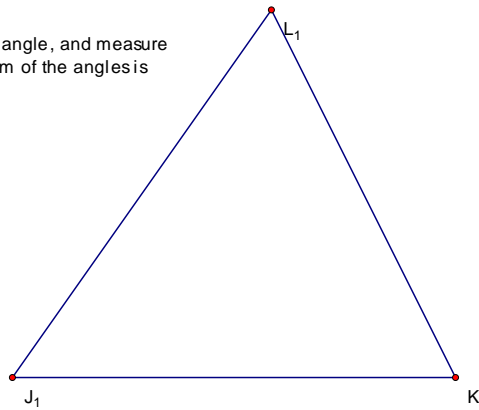
1. Find the length and the angle measure of each segment.



- 2.



3. Find the measure of sides of the triangle, and measure each angle, and then show that the sum of the angles is 180.



Rubric

| 4 | 3 | 2 | 1 | 0 |
|---|---|--|--------------------------------|----------------------------------|
| Mastering the concept of CSP, Being able to draw, hide, measure, and calculate the length and angles. | Having some understanding, being able to draw, hide, and able to measure the length only. | Limited understanding, able to draw and hide only. | Able to draw and nothing else. | No idea, no work done. Clueless. |