

Topic: Measuring Segments and Angles
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Time: 55 minutes

Introduction: In this activity the students will discover and use the Segment Addition Postulate, the protractor Postulate, the Angle Addition Postulate and the Ruler postulate. The students will also review classifying angles as acute, right, obtuse or straight.

Classroom Management: This activity is designed to be student centered with the students working in small groups with the teacher acting as a facilitator. The teacher should stop the students at certain times to tie everything together, mainly after each problem.

TI-Nspire Applications: Graphs and Geometry, Notes

Lesson Design

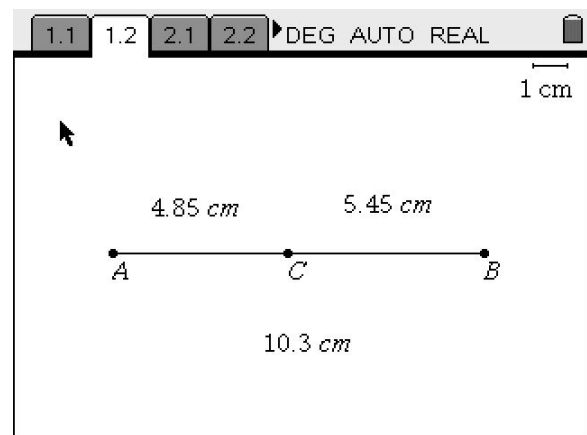
- Students should open the document *measuringsegmentsandangles.tns* on their handheld.
- The teacher should handout the student worksheet for the students to complete.
- Remind each student to save this file first in the appropriate folder before proceeding. (This helps in case the students make a mistake and would like to start from the beginning.)

Problem #1 Measuring Segments

Have the students answer the questions on the student worksheet. An Example screen shot of the completed drawing is shown at the right.

It is up to you whether you have the students use the text option and then the calculate tool to show that segment $AC + CB = AB$

Give the students 15-20 minutes to complete steps 1-6 and then together complete the definition of the Segment Addition Postulate. Ask the students if this will still work if point C is not on



segment AB? Do the points have to be collinear?

Give the students a few minutes to answer questions 8 and 9 by themselves. Check their answers.

Problems # 2

Have the students answer questions 10-19 in their group. This may take 15-20 minutes. Then discuss their answers. After they have completed this help the students come up with a definition of the Angle addition Postulate. Make sure they take into account when the angle is a straight angle.

As the students are measuring their angles they will probably want to move the measurements off to the side. You could have them use the text tool to label the angles so they know what the measurements are and to which angle they correspond.

You may also wish to use the calculate option so the students can see as they move the rays of the angles the sum will not change.

