

## Addition of Segments and Angles

by – Matt Rhodes

### Activity overview

- *This is a self-contained activity that is designed to incorporate the TI-Nspire Navigator system which provides for a paperless activity that can be easily managed during and after the class period.*
- *Students will investigate the ideas of segment and angle addition.*
- *This is a great activity for beginner Nspire users. It allows them to move through the document easily and leads them through desired conclusions and applicable examples.*

### Concepts

*Segment and angle addition.*

### Teacher preparation

*Students should know navigation on the TI-Nspire. They will need to be able to move from page to page as well as within frames of a page layout. Finally, they need to know how to grab and move a point.*

### Classroom management tips

*Students can be placed in groups of 3-4 or this activity can be presented as a teacher led discussion and discovery.*

### TI-Nspire Applications

*The following applications are used (either TI-Nspire or TI-Nspire CAS will work):*

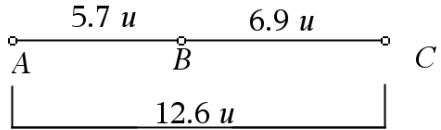
- *Graphs and Geometry*
- *Open Response Questions*
- *Notes*

### Step-by-step directions

#### **Problem 1**

Have the students open the file and read the instructions on page 1.2.

**Please Note** Open circles can be moved by the student, solid circles are locked.



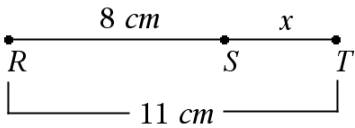
$A \quad \overset{5.7 u}{\quad} \quad B \quad \overset{6.9 u}{\quad} \quad C$   
 $\underbrace{\hspace{10em}}_{12.6 u}$

Move A, B and C. Notice patterns in the measurements. Record your observations below and in your notes.

Student types answer here

Pages 2.4 – 2.6 are basic examples of the idea. They are simple enough that students can work on them in groups, or the teacher can lead the class through as a large group.

**Please note** – Answers are provided for each example (not visible to students).



Example 1. What is the value of  $x$ ?

Student types answer here

Suggested Response:

The process in problem three is the same as in problem two. The topic, however, switches to angle addition. You will see observation screens followed by examples.

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Assessment and evaluation

*Use the tools of the Navigator software for ongoing formative assessment during the activity.*

*Activity can be collected and graded using the Portfolio tool.*

Student TI-Nspire Document

*Addition of Parts.tns*