

# Teaching Mathematics with Technology

## - An exploration with Geogebra

### Week 3

#### Animating Geogebra constructions

##### - Use of sliders and input boxes

# What have we seen so far

- Creating objects in Geogabra
- Formatting, labeling objects
- Use of a textbox for describing the construction
- Use of an input bar to define variables and also to create geometric objects

# Animating and building interactivity

- Creating dynamic constructions by changing the parameters
- Two ways of doing this
  - Sliders – defining the range of values for a parameter
  - Input boxes – user-defined parameters; can also be linked to the sliders
- Allowing interactivity to be built into lessons
- Dynamic constructions allow more explorations

# What will we construct

- Construct a triangle
  - With two given sides
  - And an angle
- Animate the sketch and observe the triangle
  - By changing the values of the sides and angle
- Taking input values to change the parameters

# Pedagogical possibilities

- Allowing students to see how the side opposite to a given angle changes when the angle is changed
- Demonstrating some special cases of triangles
- Allowing generalizations from observed changes in the value of the triangles
- Creating possibilities for mathematical conversations in class with varying parameters