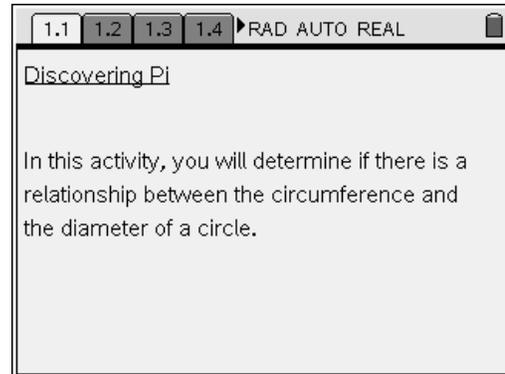


*In this activity, you will explore:*

- *The relationship between the circumference and diameter of a circle*
- *The relationship between the area and radius of a circle*

Open the file *DiscoveringPi.tns* on your handheld and follow along with your teacher to work through the activity. Use this document as a reference.



### **Exploring the Relationship between the Circumference and Diameter of a Circle**

- Read the information on page 1.2. On page 1.3, you can change the size of the circle by clicking on the circle and dragging.
- Use the measurement tool to find the circumference and diameter of the circle:
  - Press MENU, Measurement...Length.
  - Click when the circle is selected. Move this measurement to the top right corner.
  - Click when the segment (diameter) is selected. Move this measurement to the middle right of your screen.
- Store these values as variables (Cir and Diam)
  - To store a variable, **CLICK** once on the value to be stored, press CTRL + VAR, enter the name for the variable, and press ENTER.
- Advance to the spreadsheet on page 1.7 and set it up to capture data from page 1.5 manually (**MENU > Data > Data Capture > Manual Data Capture**). Data is captured into the spreadsheet each time you press CTRL + .. Capture at least 5 sets of values.
- Look at the data and see if you can find a relationship between the circumference and diameter of the circle.
- In column C, divide column a by column b. (Type =a/b in the cell with the diamond)
- What do you notice about the results?

## Exploring the Relationship between the Area and Radius of a Circle

- Read the information on page 2.1.
- Use the measurement tool to find the area and radius of the circle:
  - Press MENU, Measurement...Length.
  - Click the center of the circle and the point on the circle. Move this measurement to the middle right of your screen.
  - Press MENU, Measurement...Area
  - Click when the Circle is selected. Move this measurement to the top right of your screen.
- Store these values as variables (Area and Rad)
  - To store a variable, **CLICK** once on the value to be stored, press CTRL + VAR, enter the name for the variable, and press ENTER.
- Advance to the spreadsheet on page 1.7 and set it up to capture data from page 2.2 manually (**MENU > Data > Data Capture > Manual Data Capture**). Data is captured into the spreadsheet each time you press CTRL + .. Capture at least 5 sets of values.
- Look at the data and see if you can find a relationship between the area and radius of the circle.
- In column C, square the radius.
- In column D, divide the area by the radius squared.
- What do you notice about the results?