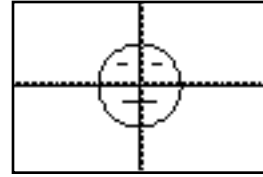
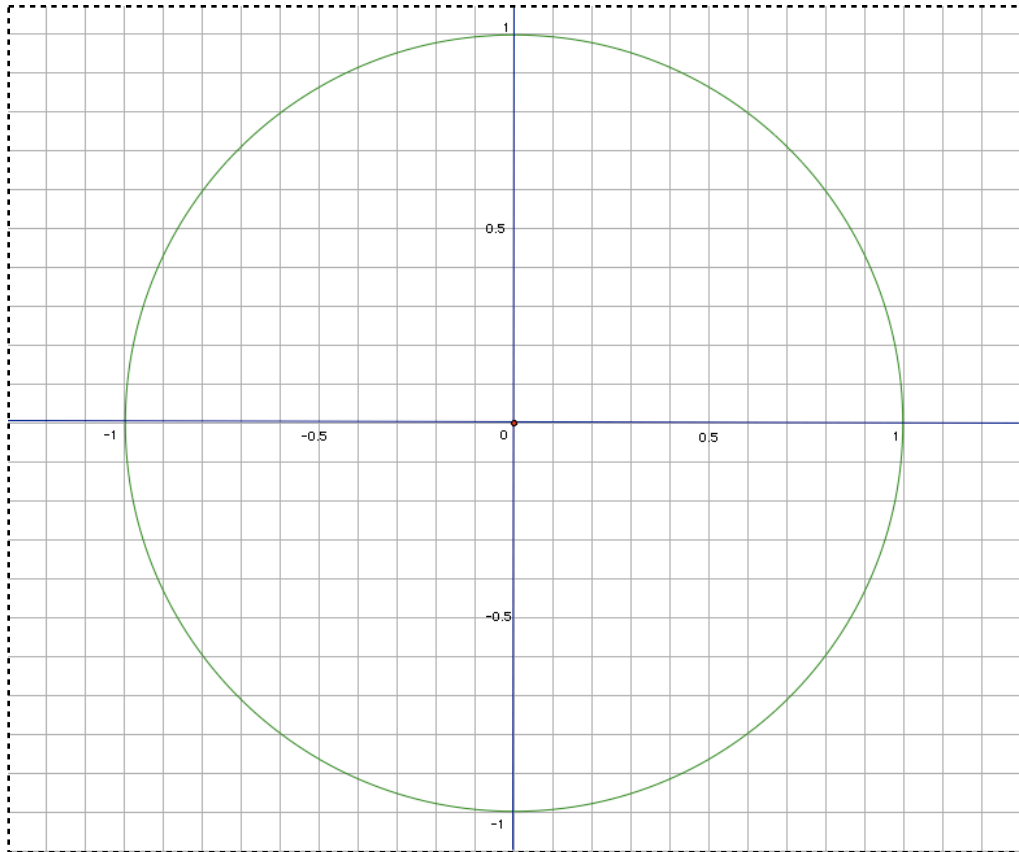


Making a Face on the Calculator

Part One: Draw a Face



1. Use line segments to draw a mouth and two eyes in the circle.



2. Label the ends of each line segment with (x,y) coordinate points.

3. For each line segment you drew, label the two ends:

Mouth: From (_____ , _____) to (_____ , _____)

Left Eye: From (_____ , _____) to (_____ , _____)

Right Eye: From (_____ , _____) to (_____ , _____)

Making a Face on the Calculator

Part Two: Programming your Calculator

1. Use the WINDOW key to change the window of your calculator to go from -2 to 2, in both the x and y directions. Make the scale 0.1.
2. After you have set the window, use the ZOOM key to make a “square” window

```
WINDOW
Xmin=-2
Xmax=2
Xscl=.1
Ymin=-2
Ymax=2
Yscl=.1
Xres=1
```

```
ZOOM MEMORY
1:ZBox
2:Zoom In
3:Zoom Out
4:ZDecimal
5:ZSquare
6:ZStandard
7↓ZTrig
```

3. Create a new calculator program.
 - a. Press the PGM key
 - b. Select NEW
 - c. Select 1: Create New

```
EXEC EDIT NEW
1:Create New
```

4. Name your program.

5. Clear the calculator screen.
 - a. Press 2nd - DRAW (above PRGM)
 - b. Select 1: ClrDraw

```
PROGRAM
Name=FACE
```

```
PROGRAM:FACE
:ClrDraw
```

6. Draw a circle, with a its center at (0,0) and a radius of 1.
 - a. Press 2nd - DRAW (above PRGM)
 - b. Select 9: Circle(

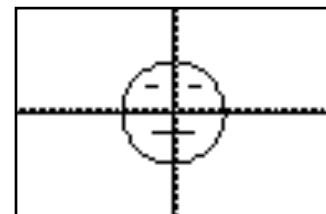
```
PROGRAM:FACE
:ClrDraw
:Circle(0,0,1)
```

7. Make the mouth.
 - a. Press 2nd - DRAW (above PRGM)
 - b. Select 2: Line(
 - c. Note: Just use commas between the coordinate points that are the ends of the line. Don't put in parentheses. For example, to draw a line from (-1, 0) to (1, 0), the command is Line(-1, 0, 1, 0)

```
PROGRAM:FACE
:ClrDraw
:Circle(0,0,1)
:Line(
```

8. Make the two eyes. When you are done, press 2nd-QUIT to leave the program screen.

```
EXEC EDIT NEW
1:FACE
```



9. Press PRGM, select EXEC, and press ENTER.