

Calculator Lab 1: Graphing

1. Set floating point precision to 4 decimal places, and evaluate π . Now set to 5 places, and again, evaluate π . What are your results? Is your calculator “rounding” or “truncating” the display of numbers?

2. Plot the circle $(x - 1)^2 + (y + 2)^2 = 3$. To do so, represent it as the graph of two functions. Enter these in your calculator as $y_1 =$ and $y_2 =$. Press “graph”. Make the zoom standard, then square. What are the coordinates of your window?

3. (#34) Use trace and zoom to estimate all relative minimum or maximum values of the function $y = x^3 - 6x^2 + 15$.

4. (#44) Plot the piecewise function

$$f(x) = \begin{cases} x^2 + 5, & x \leq 1; \\ -x^2 + 4x + 3, & x > 1. \end{cases}$$

Is $f(x)$ continuous? Why or why not?