Assignment 1: Expressions and Functions (0.1)   Name_____
Please provide a handwritten response.

1a. The TI calculators denote addition by $+$, subtraction by $-$, multiplication by $*$, and division by $\div$. For example, $\dfrac{3.017(56+45.26)}{^-97.3}$ would be represented on the TI calculators by $3.017*(56+45.26)\div(^-97.3)$.   Execute this command and record the result below.

1b. Exponents are denoted on the TI calculators using the $\wedge$ symbol located on your keyboard for all powers. Enter the following problems on your calculator, execute them by pushing **ENTER**, and record the results below

Problem	TI-89, Voyage 200
$4 \wedge 2$	$\wedge$ is on the keyboard
$5 \wedge 3$	$\wedge$ is on the keyboard
$27 \wedge (1/3)$	You must use the parentheses
$\sqrt{25}$	Use the $\sqrt{\ }$ found above the $\times$ key
$\sqrt{26}$	Note these calculators return 11 decimal places when set on **Float 12** (find by pressing **MODE (Display Digits)**). You can specify the number of decimal places by arrowing to the desired number and pressing **ENTER.**

2a. These same operations can be applied to a variable, x, to create algebraic expressions for the TI-calculators. You enter these in the graphical menu as follows:

Problem	TI-89, Voyage 200
$y_1 = \dfrac{x^2 + 7x - 11}{x^2 - 4}$	Use the green $\blacklozenge$**F1 (Y=)** key to find $y_1 =$. Enter the expression using parentheses around both the numerator and the denominator

2b. There are several ways a function like this one can be evaluated at a specific point using the TI calculators. Evaluate $f(x) = \dfrac{x^2 + 7x - 11}{x^2 - 4}$ as indicated in the following chart (you must have entered $y1 = f(x)$ before you start.

Problem	TI-89,	Voyage 200
$f(2.3)$	Type $y1(2.3)$ and press enter.	Type $y1(2.3)$ and press enter.
Evaluate at $x = 2.3$	This can also be evaluated as $y1(x)/x = 2.3$ or as $(x \wedge 2 + 7x - 11)/(x \wedge 2 - 4)/x = 2.3$ The $\mid$ is on the keyboard.	This can also be evaluated as $y1(x)/x = 2.3$ or as $(x \wedge 2 + 7x - 11)/(x \wedge 2 - 4)/x = 2.3$ The $\mid$ is found from **2nd K.**

Record your results below.

3a. Now evaluate $f(-2.3)$ in two ways and $f(2)$ in two ways and record your results below. Why do you obtain an error message when you attempt to evaluate $f(2)$?

3b. For $f(x) = \sqrt{x+1}$ evaluate $f(0)$, $f(3)$, $f(-1)$, $f\left(\dfrac{1}{2}\right)$ and record your results below.