LAB 02 QUESTIONS

QUESTION 1

Remember the laboratories in Math 128 are collaborative, so you should be talking about the questions with others around you. Pick someone sitting close to you who you will work with today. Enter the name of your partner below.

[   ]

1 points

QUESTION 2

Open the Exam_grapher.jar activity. Enter f(x) = abs(x). Find the number b to add to the function g(x) =abs(x)+b so the graph matches this picture. (You might try g(x)= abs(x)-1 or g(x)=abs(x)+1 to see how the vertical shifts work.)

[   ]

2 points

QUESTION 3

Clear the functions in the Exam grapher, and enter f(x)=sqrt(x), to plot the square root function. Plot g(x)=sqrt(x)-2 to shift the graph down two units. Set the table to provide automatic entries. Notice that some table entries are labeled NaN. "NaN" means "Not a Number." What do the x values have in common for the NaN entries? There are three correct choices to mark below.

☐ They are values not in the domain of the functions.

☐ They are values not in the range of the functions.

☐ They are values for which the functions are not defined.

☐ They are values which would require you to take the square root of a negative number.

☐ They are values that reveal symmetry with respect to the y axis.

☐ They are values that reveal symmetry with respect to the origin.

1 points

QUESTION 4

Clear the Exam grapher. Set f(x)=x^2. Find a function g(x) of the form (x+c)^2 that matches the picture below. What is the value of c?   (You will need to try specific numbers to find a match. Report the value of the number that works.)

[   ]

QUESTION 5

Open the Inverse function grapher activity. The inverse function grapher first graphs a function that you enter. Then the button labeled Graph inverse relation rotates the graph about the line y=x, which has the effect of interchanging the x and y coordinates of points on the curve. The result is the graph of the inverse relation. This relation is a function if the red graph satisfies the vertical line test, which happens if the original blue graph satisfies the horizontal line test. Graph the following functions, and use the inverse grapher to graph the inverse relation. Mark all of the functions whose inverse relations are also functions.

☐ x^3+x

☐ x^3-x

☐ sqrt(x)

☐ x^2

☐ abs(x)

QUESTION 6

Use the Inverse function grapher. Enter various linear functions, use the inverse grapher to plot the inverse, and note the slope of the inverse function. Make a conjecture about the relationship between the slope of the linear equation and the slope of its inverse.

○ The inverse function has slope the negative of the slope of the original function.

○ The inverse function has slope the same as the slope of the original function.

○ The inverse function has slope the reciprocal of the slope of the original function.

○ The inverse function has slope the negative reciprocal of the slope of the original function.

○ The inverse function has a slope that does not depend on the slope of the original function.

QUESTION 7

Use the Exam_grapher. Graph f(x) = abs(2-abs(x)) and g(x) = abs(x-2)-4. What does the graph make you want to say?

○ Got milk?

○ Just do it.

○ GE--We bring good things to life!

○ Let's gooooo, Mountaineers!

○ Melts in your mouth, not in your hands.

○ A diamond is forever.

Click Save and Submit to save and submit. Click Save All Answers to save all answers.