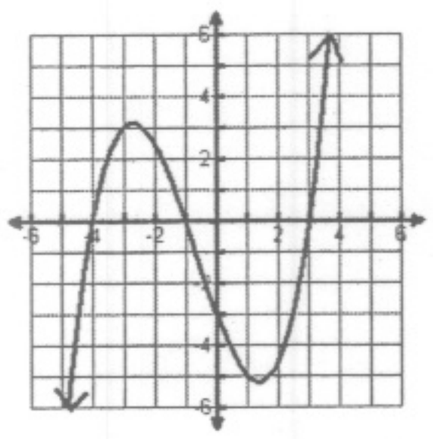
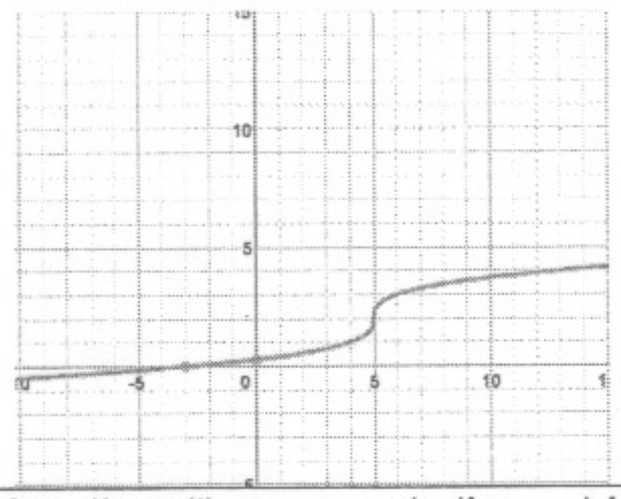
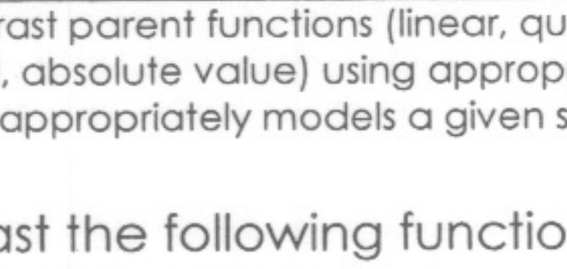
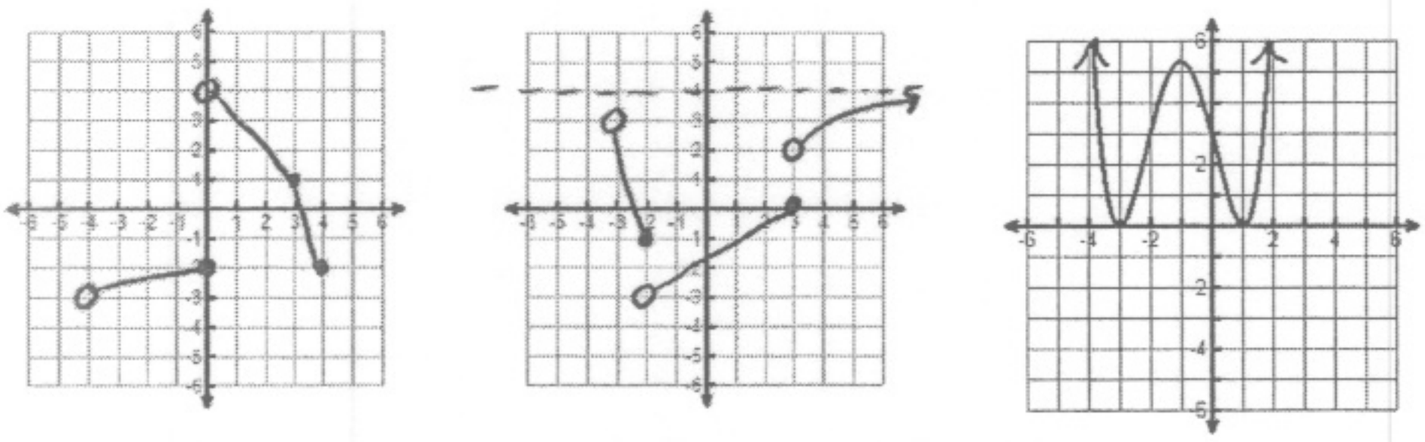
Stations Check
Unit 2 – Interpreting Functions

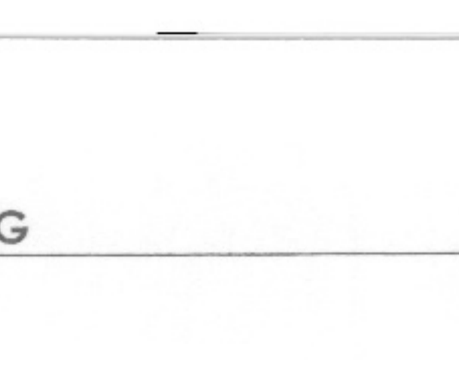
Directions: Complete each problem below to the best of your ability. Once you check your answers you will be able to determine which learning targets you need to practice the most before the test on Friday.

FLUENCY

Learning Target	Self Score (circle one)			Do you need to practice this learning target?
2A I can use technology to graph a function (as well as systems) and analyze the graph to describe relevant key features (End Behavior, Domain, Range, Min/Max, x-& y-intercept, intersection(s)) Analyze all key features of the graphs below, including the name of the function  	4	2	NR	Yes
	4	2	NR	No
2B I can compare and contrast parent functions (linear, quadratics, cubics, square root, cube root, exponential, absolute value) using appropriate tools and defend which parent function most appropriately models a given situation Compare and contrast the following functions (use whatever tool you want to graph each function) Function A $f(x) = -3(x-5)^2 + 2$ Function B $h(x) = 3\|x-5\| + 2$	4	2	NR	Yes
	4	2	NR	No
The graph shows the speed of an airplane during a trip from Tucson to Las Vegas. **Which situation is best represented by the graph?** **Trip from Tucson to Las Vegas**  A. **An airplane took off and increased speed steadily for 15 minutes. For 30 minutes, the plane flew at 600 mph. The airplane then steadily decreased speed until it landed 20 minutes later.** B. **An airplane took off and increased speed steadily for 15 minutes. For 30 minutes, the plane flew at 600 mph. The airplane began to slow down steadily until its speed was 300 mph. The airplane circled the airport for about 7 minutes, and then slowed down steadily until it landed 15 minutes later.** C. **An airplane took off and increased speed steadily for 15 minutes. For 30 minutes, the plane flew at 600 mph. The airplane began to slow down steadily until the speed was 100 mph. The airplane circled the airport for about 10 minutes, and then slowed down steadily until it landed 15 minutes later.** D. **An airplane took off and increased speed steadily for 15 minutes. For 45 minutes, the plane flew at 600 mph. The airplane began to slow down steadily until the speed was 300 mph. The airplane circled the airport for about 7 minutes, and then slowed down steadily until it landed 75 minutes later.**	4	2	NR	

2C I can define a function and describe its Domain and Range graphically, algebraically and numerically and interpret the domain and range for a given situation. Write the domain and range of each function below 	4 4 4	2 2 2	NR NR NR	 Yes No
2D I can graph linear piece-wise functions, describe relevant key features, explain how the constraints determine the domain and use the constraints to evaluate the function at a given point in the domain. Graph the following functions $f(x) = \begin{cases} x+1, & \text{for } x \le -3, \\ -1, & \text{for } -3 < x < 4, \\ \frac{1}{2}x, & \text{for } x \ge 4 \end{cases}$ $f(x) = \begin{cases} -1, & \text{if } 0 \le x < 1 \\ -3, & \text{if } 1 \le x < 2 \\ -5, & \text{if } 2 \le x < 3 \\ -7, & \text{if } 3 \le x < 4 \\ -9, & \text{if } 4 \le x < 5 \end{cases}$ Evaluation the following inputs: $h(t) = \begin{cases} 2t, & if\ t < -2 \\ t-2, & if\ -2 \le t \le 2 \\ -2, & if\ t > 2 \end{cases}$;Find h(-7), h(-1), h(-2), h(4), h(8)	4 4 4	2 2 2	NR NR NR	 Yes No
1B I can calculate measures of central tendency and dispersion of a data set and use the mean and standard deviation to sketch and label a normal curve, when appropriate, and interpret/apply the "68-95-99.7 rule" **2) At a high school, classes begin at 7:30. The average arrival time is 7:25 with a standard deviation of 2.5 minutes.** **a) On an ordinary day, what percent of the students are late?** **b) What percent of the students arrive before 7:20?** **c) Gahr High School's student population is 1,900. How many students arrive between 7:20 and 7:30?** **d) How many students arrive by 7:25?** **e) 68% of the students at Gahr arrive between what two times?** **f) 57 students arrive before or after what two times?**	4	2	NR	Yes No

DEEP UNDERSTANDING

Learning Target	Self Score (circle one)	Do you need to practice this learning target?
Unit 2 Suppose your parents have restricted your driving to less than 80 miles a day or lose your car privileges. One morning you start driving the car with an odometer reading of 100 and drive as much you are allowed. Complete a table of ordered pairs, label each axis. and graph the relation with these restrictions. Distance | Odometer 0 20 40 60 80 	4 3 2 1 NR	Yes No
Unit 2 1) Using domain and range given, sketch a graph (There are many possible solutions) D: $\{x: -4 \le x \le 3\}$ R: $\{y: [2,5)\}$ D: $\{x: -4 \le x \le 3\}$ R: $\{y: [2,5)\}$ 2) Find a graph that would fit the following description and **Explain your choice.** x-intercept = Does not Exist and y-intercept = 1 End Behavior: $x \to \infty^+ \; then \; y \to \infty^+ \; and \; x \to \infty^- \; then \; y \to 0$	4 3 2 1 NR 4 3 2 1 NR	Yes No
Unit 1 **ACT versus SAT** You are registering for classes during your first semester at college. The advisor asks to see either your ACT math score or your SAT math score so she can enroll you in the appropriate math class. You scored 25 on the ACT math portion and 650 on the SAT math score. In the math portion of the ACT exam, the mean score is 20.7, with a standard deviation of 5, while the SAT math portion has a mean score of 514, with a standard deviation of 113. Which test score should you provide to the advisor, assuming that you wish to enroll in the highest-level course possible? Why?	4 3 2 1 NR	Yes No