GSE Algebra 1 **HW #6.5** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Tell if the following are functions or not functions.

1. 2)  3) 
2. How do you know if a function is NOT a function? Explain!

**Compare the following rates of change.**

The graph at the right shows a time vs. distance graph of two cars traveling in the same direction along the freeway.

1. Which car has the cruise control on? How do you know this?
2. Which car is accelerating? How do you know?
3. Identify the interval in figure 1 where car A seems to be going faster than car B.
4. For what interval in figure 1 does car B seem to be going faster than car A?
5. A third car C is now shown in the graph (figure 2). All 3 cars have the same destination. If the destination is a distance of 12 units from the origin, which car do you predict will arrive first? Explain how you know!
6. A positive quadratic, a positive linear and an exponential growth are all racing

to get to infinity. Who will get there first? Why?

1. Tell the characteristics for the following functions.

Domain:

Range:

 

Domain:

Range:

1. Tell all the characteristics for the following quadratic.



Domain: Range: x-ints:

y-int: Incr: Decr:

vertex: axis of symm: Direction:

function? Discr/Cont Max/Min:

End Beh: $x\rightarrow -\infty y\rightarrow $

 $x\rightarrow \infty y\rightarrow $

1. Given the following, put in standard form: $3(x-1)(2x+4)$

What are the x-intercepts for this quadratic? What direction will it face?

1. Find the rate of change (**SLOPE**) for the following:
	1. (2, 10) (-4, 6) b. Ramp: rises 10 ft, runs 50 ft c. From x = 1 to x = 5