Name _____   Period _____   Date _____

FUNCTION CARNIVAL RATE GRAPHS

Go to student.desmos.com and do the Desmos activity called Function Carnival.
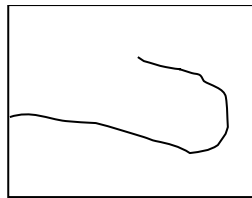
1. Here are some student sketches of the Cannon Man graph, the Bumper Car graph, and the Ferris Wheel graph. Maybe you did a better job than these students.

   a. Which of these could be the graph of a function? Explain.
   b. Which of these graphs show increases? Decreases? Explain.
   c. Which of these graphs appear to be linear? Nonlinear? Explain.
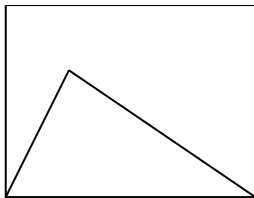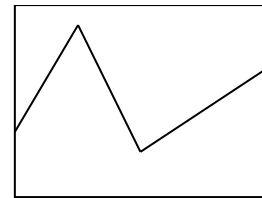
Cannon Man (height off ground vs time)	Bumper Car (distance traveled vs time)	Ferris Wheel (height off ground vs time)
function	not a function	function

2. Draw sketches for the following. Notice that changes have been made to the variables.
   Graphs will vary.

Cannon Man (height off ground vs time)	Bumper Car (distance traveled vs time)	Ferris Wheel (height off ground vs time)
vertical distance will increase and then decrease over time	speed will stay constant (or close to it) over time	distance traveled will increase at a constant rate over time

3. Look at the following two graphs below. Describe how they are different. Describe how they are the same. Use vocabulary like on **Practice 5** in **Packet 4**.
   Both represent a function, both increase and decrease; the first is linear, the second is not.
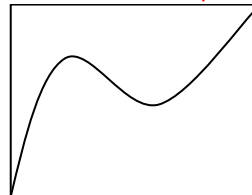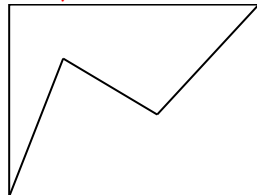
4. Make up the same scale for the axes in the graphs above and estimate appropriate ordered pairs for each graph (like on **Practice 5** in **Packet 4**).
   Scales may vary, but when both have the same scale, ordered pairs may be the same or very similar for many points along these graphs. For example, (0, 0), (1, 3), (2.5, 2), (4, 5)