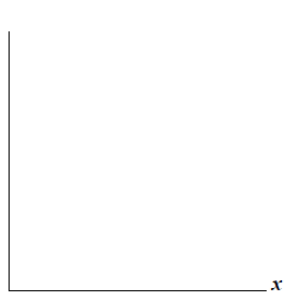
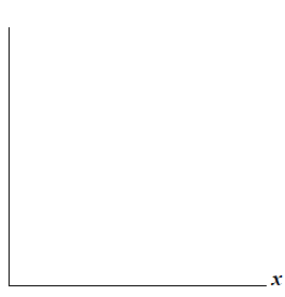
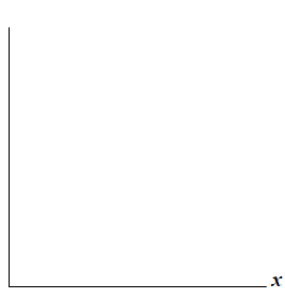
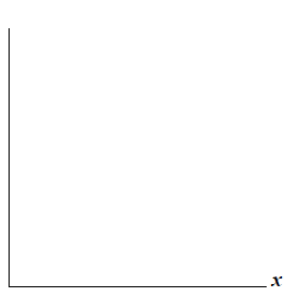
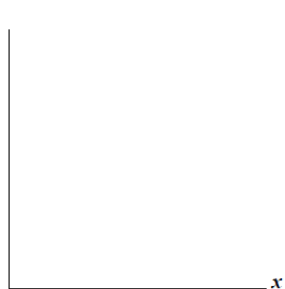
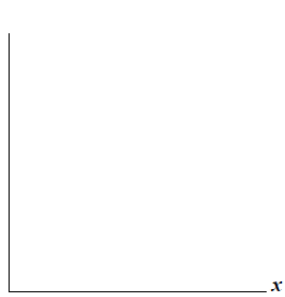
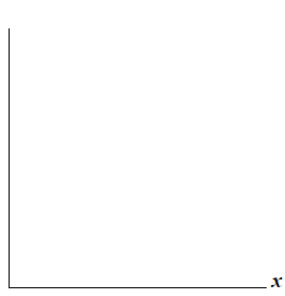
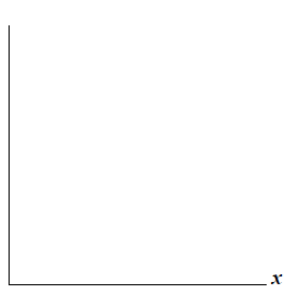
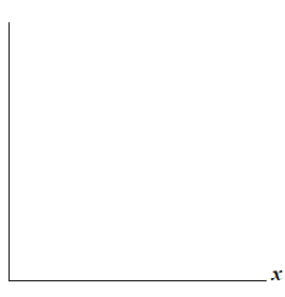
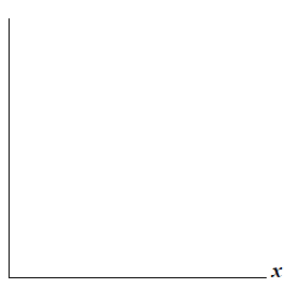


**Function Family Context Problems**

Name \_\_\_\_\_ A# \_\_\_\_\_

For each context problem, identify what type of function (**linear, quadratic, exponential, inverse variation, sine, absolute value, step**) would best be used to model the situation and sketch a rough graph of what the situation might look like. Be sure to label your x-axis and y-axis.

<p>1. On a movie subscription service, you can watch the first two movies for free, but then you get charged \$5 per movie watched after that. What type of function could be used to represent the total money, <math>d</math>, that you would spend in dollars after watching <math>n</math> number of movies? (Assume that you can be charged a partial fee for watching a partial movie)</p> <p>Type of Function _____</p>	
<p>2. A piece of paper is folded in half. It is then folded in half again, and again, and so forth. What type of function would represent the thickness of the paper, <math>y</math>, in inches after <math>x</math> number of folds?</p> <p>Type of Function _____</p>	
<p>3. A car drives along a test track, where <math>s</math>, <b>the independent variable</b>, is the speed of the car in meters per second and <math>t</math> is the time it takes to travel the length of the track in seconds. What type of function would best represent this situation?</p> <p>Type of Function _____</p>	
<p>4. A ferris wheel turns round and round at the local county fair. What type of function could be used to relate the height of a seat from the ground in meters, <math>h</math>, to the time that has elapsed in seconds, <math>s</math>?</p> <p>Type of Function _____</p>	
<p>5. A golfer at a national tournament is shown as he hits a ball into the air and watches as it returns to the ground. What type of function could model the height of the ball, <math>h</math>, in meters after <math>s</math> seconds?</p> <p>Type of Function _____</p>	

<p>6. The value of a car depreciates by 10% each year. What type of function would best relate the value of the car, <math>v</math>, in dollars after <math>x</math> number of years?</p> <p>Type of Function _____</p>	
<p>7. In your most recent cell phone plan, you pay one specific price for a set number of minutes. If you want to add more minutes, you pay another specific price for the next highest set of minutes, and so forth. What kind of function would best represent this situation?</p> <p>Type of Function _____</p>	
<p>8. A ball is thrown straight up from 3 meters above the ground with a velocity of 14 meters/second. The ball is allowed to fall back down to the ground. What kind of function would best relate the height of the ball, <math>h</math>, in meters to time, <math>t</math>, in seconds?</p> <p>Type of Function _____</p>	
<p>9. The cost of postage for a package increases two cents for every whole ounce of increase in weight. What kind of function would best represent this situation?</p> <p>Type of Function _____</p>	
<p>10. Your favorite artist released a new single at the beginning of the summer and you recently overheard on the radio that weekly sales increased steadily for awhile then abruptly began to decrease at the same steady rate. What function would best model the relationship between weekly sales, <math>s</math>, and time, <math>t</math>?</p> <p>Type of Function _____</p>	

College Prep – Write your own context problem for a linear function.

Honors – Write an equation for a linear function problem and an exponential function problem from #1-10.