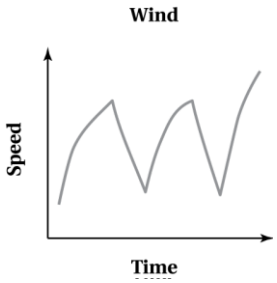
Name: _____ Period: _____

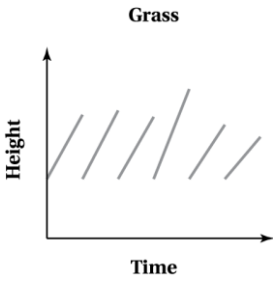
6.5 Analyzing and Sketching Graphs

In each problem, describe the progress represented in the graphs between the two quantities.

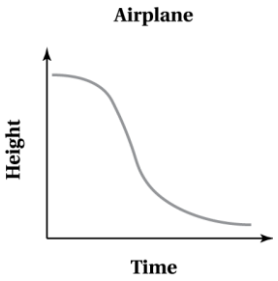
1)



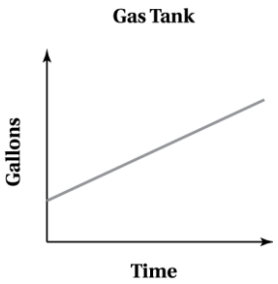
2)



3)



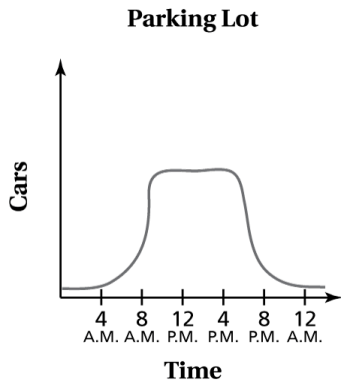
4)



5) The graph shows the number of cars in the parking lot over a 24 hour period.

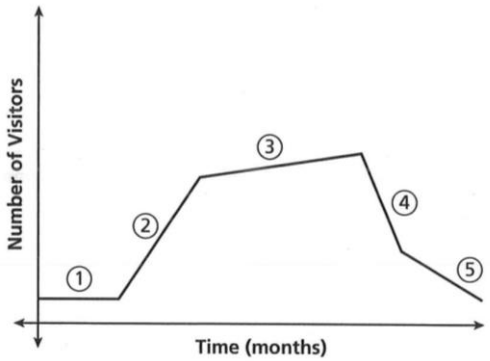
a) Describe the change in the number of cars from 7:00 A.M. to 9:00 A.M.

b) Describe the change in the number of cars from 5:00 P.M. to 7:00 P.M.



6) A roller coaster park is open from May to October each year. The graph shows the number of park visitors over its season.

a) Segment l shows that attendance during the opening days of the park's season stayed constant. Describe what Segment 2 shows.



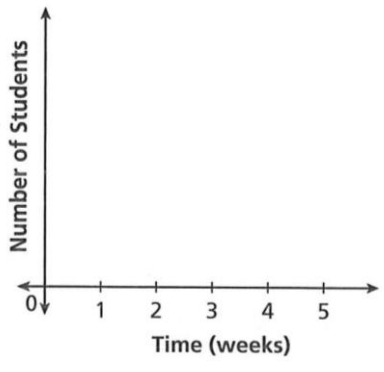
b) Based on the time frame, give a possible explanation for the change in attendance represented by Segment 2.

c) Which segments of the graph show decreasing attendance? Give a possible explanation..

d) Explain how the slant of each segment of the graph is related to whether attendance increases or decreases.

7) Mrs. Sutton provides free math tutoring to her students every day after school. No one comes to tutoring sessions during the first week of school. Over the next two weeks, use of the tutoring service gradually increases.

a) Sketch a graph showing the number of students who use the tutoring service over the first three weeks of school.

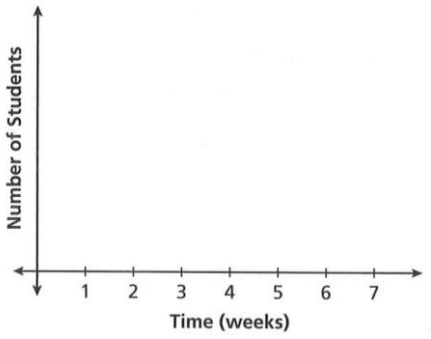


b) Mrs. Sutton's students are told that they will have a math test at the end of the fifth week of school. How do you think this will affect the number of students who come to tutoring?

_____

_____

c) Considering your answer to part "b" above , sketch a graph showing the number of students who might use the tutoring service over the first six weeks of school.



d) Suppose Mrs. Sutton offered bonus credit to students who came to tutoring sessions. How do you think this would affect the number of students who come to tutoring?

_____

_____

e) How would your answer to part "d" affect the graph?

_____

_____

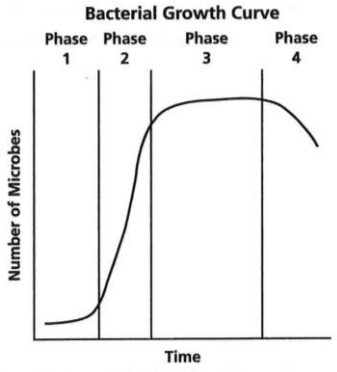
8) In a lab environment, colonies of bacteria follow a predictable pattern of growth. The graph shows this growth over time.

a) During which phase is growth slowest? During which phase is growth fastest? Explain.

_____

_____

_____



b) What is happening to the population during Phase 3?

_____

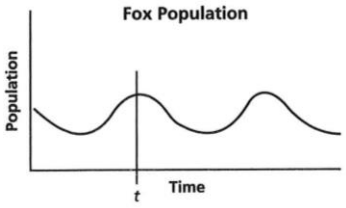
_____

c) What is happening to the population during Phase 4?

_____

9) A woodland area on an island contains a population of foxes. The graph describes the changes in the fox population over time.

a) What is happening to the fox population before time *t?*



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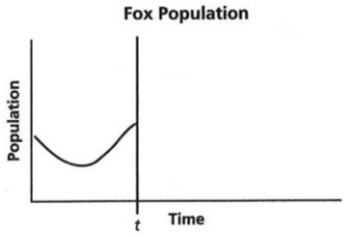
b) At time *t*, a conservation organization moves a large group of foxes to the island. Sketch a graph to show how this action might affect the population on the island after time *t*.



c) At some point after time *t*, a forest fire destroys part of the woodland area on the island. Describe how your graph from problem 5 might change.

_____

_____

Sketch a graph that represents the given situation.

10) The flu virus spreads quickly at first and then more slowly.

11) The sales of a new cell phone increase at an increasing rate, then the sales remain the same, and then the sales decrease at a constant rate.

12) The outside temperature decreased at a decreasing rate and then decreased at a constant rate.