Present neatly. Justify for full credit. No Calculators.

Name _____   Score _____   ~10 minutes / A

1.[Short Essay]

In some population models it is assumed that a given ecological system possesses a
carrying capacity L. Populations greater than the carrying capacity tend to decline
toward L, while populations less than the carrying capacity tend to increase toward L.
Explain why these assumptions are reasonable, and discuss how the calculus concepts we
have learned recently apply to such a model. Be creative.

Present neatly. Justify for full credit. No Calculators.

Name _____   Score _____   ~20 minutes / F

1. [Short Essay]

In some models for learning a skill (e.g., juggling), it is assumed that the skill level for an individual increases with practice but cannot become arbitrarily high. How do the calculus concepts we have learned recently apply to such a model? Be creative.