Characteristics of Populations Homework

Read "r & K strategists, carrying capacity" link in Chapter 51 on our website. The URL is:
http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/P/Populations2.html

Answer the following questions:

1. Compare and contrast the characteristics of density-dependent and density-independent checks on population growth. Give several examples of each type.

2. What is *Intraspecific Competition?*

3.. Describe *Interspecific competition*. Summarize the work of Gause with *Paramecium* species that illustrates this principle.

4. Briefly identify and describe two other types of density dependent factors.

5. Identify the purpose and each of the terms in the following equation:

$$\frac{\mathbf{dN}}{\mathbf{dt}} = \mathbf{rN}$$

6. What type of graph results from a plot of this equation? (no mitigating factors)

7. Explain the term *carrying capacity.* What mathematic symbol is used to denote it?

8. Identify five features shared by r-strategists, and give three examples of organisms which generally conform to this strategy. (also see second link: Tabular Summary...)

9. Identify five features shared by K-strategists, and give three examples of organisms which generally conform to this strategy.

10. Is it possible for a population to shift from one strategy to another? Explain.