Name _____ Date _____ Period _____

Lab: Graphing and Interpreting a Survivorship Curve

BIOLOGY

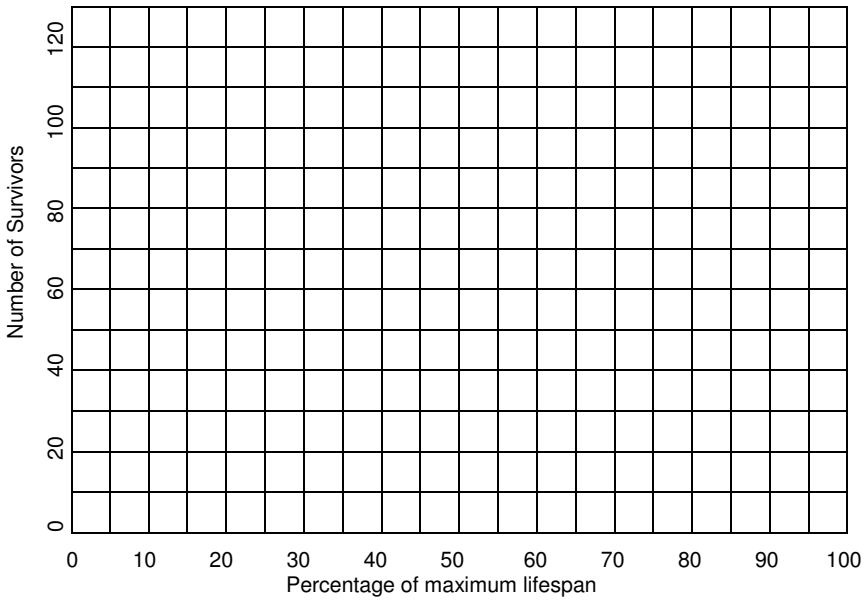
Background: A ***survivorship curve*** is a generalized diagram showing the number of surviving members over time from a measured set of births. By measuring the number of offspring born in a year and following those offspring through until death, survivorship curves give information about the life history of a species.

TABLE 1: TYPE 1 SURVIVORSHIP DATA										
Number of Survivors	99	98	96	93	90	85	75	60	30	0
% of maximum life span	10	20	30	40	50	60	70	80	90	100
TYPE 2 SURVIVORSHIP DATA										
Number of Survivors	90	80	70	60	50	40	30	20	10	0
% of maximum life span	10	20	30	40	50	60	70	80	90	100
TYPE 3 SURVIVORSHIP DATA										
Number of Survivors	43	22	14	9	7.5	6	4.5	3	1.5	0
% of maximum life span	10	20	30	40	50	60	70	80	90	100

Procedure:

1. **Graph Data**: Plot the data in Data Table 1-3 showing the number of **Survivors** vs. **Percentage of maximum life span** in the graph below. Construct a **line graph** showing the <u>three</u> different types of survivorship curves (see pages 438-439). Use different colors for each of the three survivorship curves and include a key.

SURVIVORSHIP CURVES



2. Describe the differences between the three types of survivorship curves. How do they differ?

3. What type of organisms are represented by the three types of curves?

Type 1-

Type 2-

Type 3-

4. Rank the three survivorship curves from lowest to highest birth rates.

5. Rank the three survivorship curves from lowest to highest death rates.

6. Which curve show an equal chance of dying regardless of age?

7. Do you think there is any relationship between survivorship curves and reproductive strategies? Explain

8. An organism has ten offspring. Two of these offspring die each year over a five-year period. Is the organism more likely to be a bird or an insect? Explain

9. Using the graph you constructed, estimate how many cockroaches would survive by the time they reached 50% of its maximum lifespan?

10. What percentage of humans born will reach age 40 (roughly 50% of maximum lifespan)?