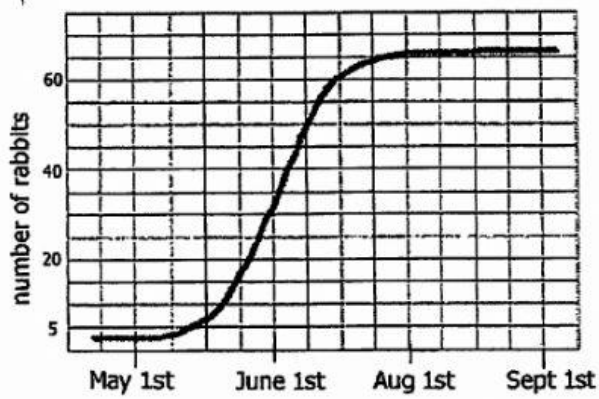
Name:_____Date:_____

INTERPRETING ECOLOGICAL DATA



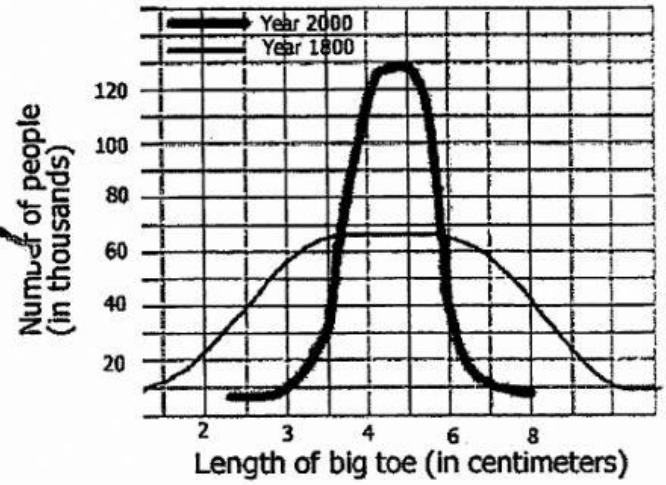
Graph 1: Rabbits Over Time

a. The graph shows a _____ growth curve.

b. The carrying capacity for rabbits is _____

c. During which month were the rabbits in exponential growth?

Graph 2: Average Toe Length



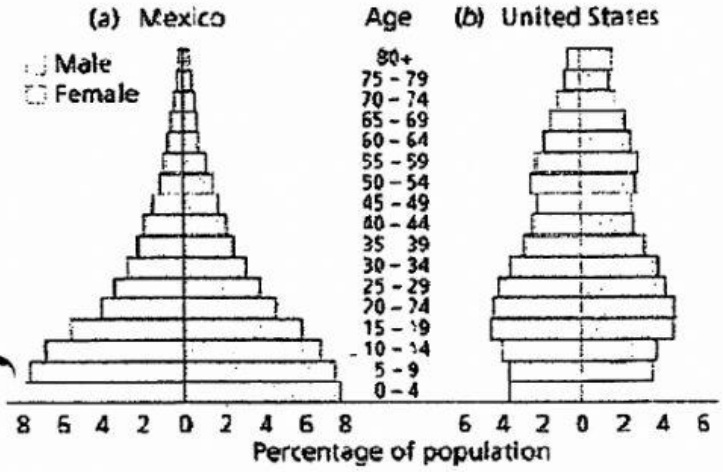
a. In 1800, about how many people surveyed had a 3 cm toe? _____

How many in 2000? _____

b. The data shows the _____ selection has occurred?

c. In 2000, what is the average toe length? ____ What is the average toe length in 1800 _____

Graph 3: Mexico and US



a. In Mexico, what percentage of the population is between 0-4 years of age? _____ In the US? _____

b. Which population is growing the fastest? _____

c. Which age group has the smallest number in both countries? _____

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LIVEWORKSHEETS

Chart 4: Trapping Geese

In order to estimate the population of geese in Northern Wisconsin, ecologists marked 10 geese and then released them back into the population. Over a 6 year period, geese were trapped and their numbers recorded.

Year	Geese Trapped	Number with Mark
1980	10	1
1981	15	1
1982	12	1
1983	8	0
1984	5	2
1985	10	1

$$\frac{\text{(Total number captured) x (number marked)}}{\text{(total number recaptured with mark)}}$$

a. Use the formula to calculate the estimated number of geese in the area studied? _____

b. This technique is called _____ & _____

c. Supposing more of the geese found in the trap had the mark, would the estimated number of geese in the area be greater or lesser? _____

Chart 5: Mushroom Plots

Another ecologist uses a different method to estimate the number of mushrooms in a forest. She plots a 10x10 area and randomly chooses 5 spots, where she counts the number of mushrooms in the plots and records them on the grid.

			5						2
	3								
			2				3		

a.Calculate the number of mushrooms in the forest based on the grid data: _____

b. Thie technique is called _____

Chart 6: Snakes & Mice

Year	Snakes	Mice born	Mice died
1960	2	1000	200
1970	10	800	300
1980	30	400	500
1990	15	600	550
2000	14	620	600
2001	15	640	580

The data shows populations of snake and mice found in an experimental field.

a. During which year was the mouse population at zero population growth?

_____

b. What is the carrying capacity for snakes?

_____

c. What is the carrying capacity for mice?

_____

d. What is the rate of growth (r) for mice during 1970? _____ During 1980? _____

LIVEWORKSHEETS