

Name: _____

Period: _____

Date: _____

Analyzing Data

In 1949, Erwin Chargaff discovered that the relative amounts of A and T, and of G and C, are almost always equal. The table below shows a portion of the data that Chargaff collected.

Percentage of Bases in Five Organisms

Source of DNA	A	T	G	C
<i>Streptococcus</i>	30	30	20	20
Yeast	32	32	18	18
Herring	28	28	22	22
Human	30	30	20	20
<i>E. coli</i>	24	24	26	26

1. Which organism has the highest percentage of adenine?
2. If a species has 35% adenine in its DNA, what is the percentage of the other three bases?
3. What did the fact that A and T, and G and C, occurred in equal amounts suggest about the relationship among these bases?

The following table below shows the results of measuring the percentages of the four bases in the DNA of several different organisms. Some of the values are missing from the table.

Nitrogenous Bases (%)

Organism	A	G	T	C
Human		20	30	
Chicken	29			21
Bacterium <i>S. lutea</i>	13			

1. Based on Chargaff's rule, the percentage of adenine bases in human DNA should be around?
 - a. 30%
 - b. 20%
 - c. 21%
 - d. 13%
2. The value for the percent of guanine bases in the bacterium would be expected to be about:
 - a. 13%
 - b. 29%
 - c. 36%
 - d. There is not enough information given.