

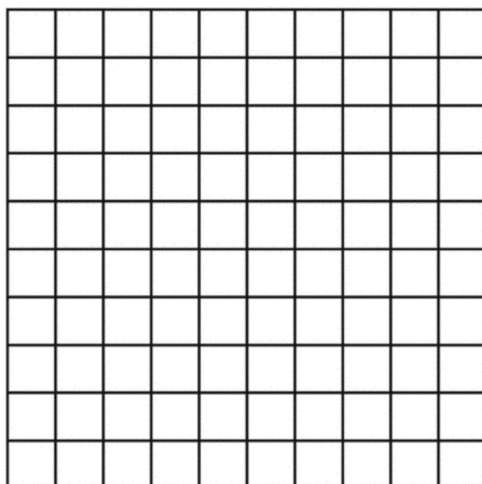
**Name:** \_\_\_\_\_

**AP Statistics Assignment 4.2 Two Way Tables**

In a study, researchers looked at the relationship between the type of college (public or private) attended by 3265 members of the same graduating class who went into industry and the level of job each member had 20 years later. The results were:

<b>Management level</b>	<b>Public</b>	<b>Private</b>
High	75	107
Middle	962	794
Low	732	595

1. Calculate the marginal distribution of management level in percents.
2. Compute the conditional distributions of management level given college type (in percents).
3. A segmented bar graph allows a graphical comparison of distributions. Each bar describes one group, and the bar is divided into segments to show the distribution for that group. Each bar has height 100%. Show the conditional distributions from Question 2 as a segmented bar graph. Be sure to label both axes and provide a key to identify the segments.

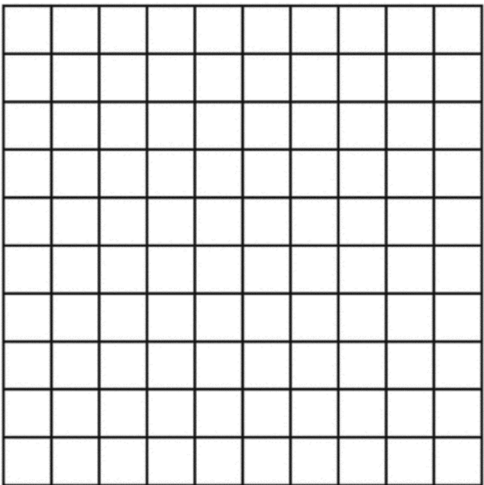


4. Comment on the observed relationship.

Two candy factories, A and B, produce 3 flavors of gum: spearmint, cinnamon, and wintergreen. Here is a two-way table of factory ( $x$ ) by gum flavor ( $y$ ), with each entry in the table representing the number of packs of gum of a certain flavor produced during a given day.

	Spearmint	Cinnamon	Wintergreen
A	250	150	50
B	175	180	25

1. Compute the marginal distribution of gum flavor (expressing your results in percents).
2. Construct a bar graph on the grid provided to show your results from Question 1.



3. Compute the conditional distribution of gum flavor given the factory. Show the distribution in a table.
4. Briefly describe your findings from Question 3 in words.