

## VOCABULARY PRACTICE, CONTINUED

**B. The Same But Different** For each pair of words listed in the table below, list one way that they are similar and one way that they are different.

SIMILARITY	WORD PAIRS	DIFFERENCE
laws of genetics developed by Mendel	law of segregation	<i>organisms have two copies of every gene but donate only one</i>
	law of independent assortment	<i>characteristics are inherited independently of each other</i>
1.	autosome	
	sex chromosome	
2.	somatic cell	
	gamete	
3.	sperm	
	egg	
4.	homozygous	
	heterozygous	
5.	dominant	
	recessive	
6.	diploid	
	haploid	
7.	monohybrid cross	
	dihybrid cross	

## VOCABULARY PRACTICE, CONTINUED

**C. Complete the Story** Below is a story about Mendel's experiments. Fill in the blanks with words from the word bank to complete the story. Each word is used only once.

crossed	gene	law of independent assortment	traits
crossing over	genetic	law of segregation	
gametogenesis	genetic linkage	purebred	

Gregor Mendel wanted to understand how \_\_\_\_\_ were inherited, so he performed \_\_\_\_\_ experiments using pea plants. Mendel used plants that were \_\_\_\_\_, which means that the plants had self-pollinated for so long that the offspring always looked like the parent plant. He examined seven "either-or" characteristics. First, Mendel \_\_\_\_\_ a plant displaying the dominant phenotype with a plant displaying the recessive phenotype. Next, he allowed the offspring of this cross, the F<sub>1</sub> generation, to self-pollinate, and then calculated the phenotypic ratios that he observed in the F<sub>2</sub> offspring.

From his monohybrid crosses, Mendel developed his first law, the \_\_\_\_\_. This law states that each parent organism has two copies of each discrete unit, or \_\_\_\_\_, and that the two copies separate from each other during \_\_\_\_\_. Mendel then performed dihybrid crosses, and as a result, developed his second law, the \_\_\_\_\_. This law states essentially that the inheritance of one trait does not influence the inheritance of another trait. Mendel's second law applies to genes that are on separate chromosomes or to genes that are so far apart on the same chromosome that they have a strong chance of being separated by \_\_\_\_\_. However, his second law does not apply to genes that exhibit \_\_\_\_\_ because they are close together on the same chromosome.