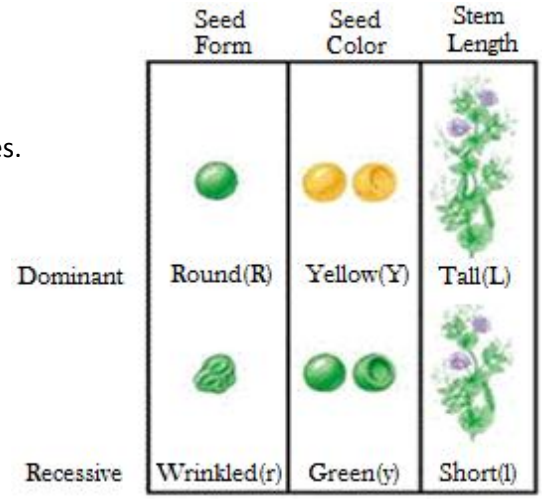
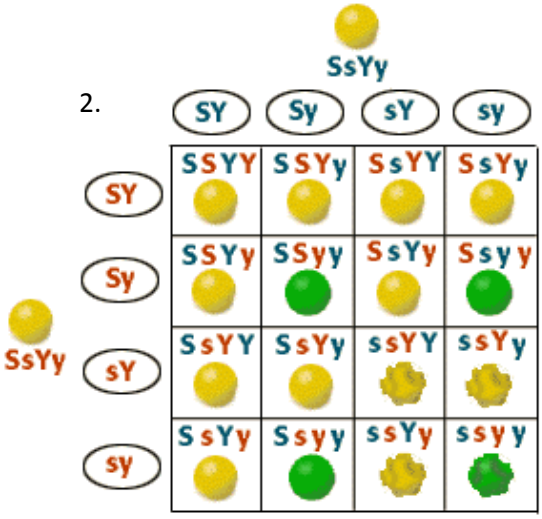
Name: _____ Date: _____ Period: _____

Genetics Gateway Review

1. Use the diagram to the right to compare/discuss the following pairs of terms. Write in complete sentences.
   - Dominant and Recessive
   - Homozygous and Heterozygous
   - Genotype and Phenotype



2. 

Write at least one well-developed paragraph interpreting the genotypes and phenotypes of the dihyrbid cross to the left. [smooth (S) or wrinkled (s) and yellow (Y) or green (y)]

3. A child is born with type AB blood. John has type O blood and believes he is the father while the mother has type AB blood. Draw a punnett square with the cross of the two potential parents' blood types and determine if John really is the father. Write at least one well-developed paragraph justifying your answer. (Be sure and refer to your punnett square.)

4. Hemophilia is an X-linked recessive trait. If a mother who is a carrier for the hemophilia trait marries a man that does not have the hemophilia trait, is it possible for any of their children to have hemophilia passed on to them? Draw a punnett square for the possible offspring outcome. Then, write a well-developed paragraph explaining the punnett square and whether or not any of their children could have hemophilia.