

Introduction to Genetics Review

Read each question below carefully and make sure that you have answered **ALL PARTS OF THE QUESTION**. Please answer using full sentences!

1. What is a gene?
2. What are the factors called that determine the expression of a trait?
3. How many alleles do you have for each of your genes? Explain why.
4. Explain the difference between a dominant and recessive allele.
5. Explain what a genotype is.
6. Explain what a phenotype is.

7. Explain the difference between being homozygous or heterozygous for a trait.

8. For the following genotypes, write Ho if it is homozygous and He if it is heterozygous:

_____ AA

_____ ee

_____ Mm

_____ Cc

_____ Tt

_____ PP

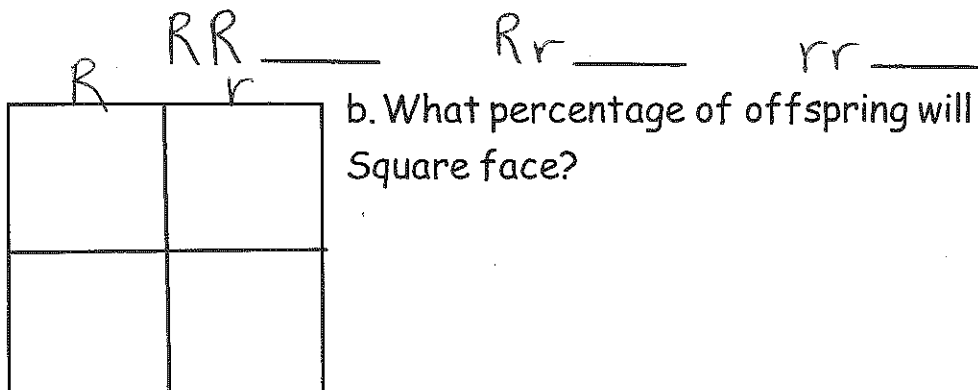
9. If the allele for a round shaped face is dominant (i.e. R) and a square shaped face is recessive (i.e. r):

a. What are all the possible genotypes for a round shaped face?

b. What are all the possible genotypes for a square shaped face?

10. Complete the Punnett square below for a parent who is homozygous dominant for a round shaped face (i.e. RR) with a parent who has a square shaped face (i.e. rr). Then answer the following questions:

a. What percentage of offspring will have the following genotypes:



b. What percentage of offspring will have a round face?
Square face?