

## Module 8 Test Review

Know these terms:

Allele	Polygenetic inheritance
Genotype	Incomplete dominance
Phenotype	Epistasis
Homozygous	Pleiotropy
Heterozygous	Codominance
Dominant allele	Rh factor
Recessive allele	Autosomal inheritance
Pedigree	Sex-linked inheritance
Monohybrid cross	Allele mutation
Dihybrid cross	Changes in chromosome structure
Autosomes	Changes in chromosome number
Sex chromosomes	Genetic disease carrier

Know the four principals of genetics

Be able to determine genotypes from a pedigree chart

Complete Punnett squares for a:

- monohybrid cross
- dihybrid cross
- sex-linked cross
- blood type and Rh-factor crosses

Know several genetic disorders by name

Understand the different types of chromosome mutations:

deletion, duplication, inversion, insertion, translocation

Honors: The Circulatory System

### Monohybrid Cross Practice

1. Cross a heterozygous black mouse with a white mouse
2. Cross two heterozygous black mice

#### KEY

B = black  
b = white

R = round ears  
r = pointed ears

### Dihybrid Cross Practice

3. Cross a homozygous black mouse who has round ears (heterozygous) with a white mouse with round ears (heterozygous).

Parent Mice	Mouse #1	Mouse #2
Genotype		
Allele combinations		

#### Offspring Mice

Genotype	Fraction

Phenotype	Fraction

4. Cross two heterozygous black mice with round ears (heterozygous).

Parent Mice	Mouse #1	Mouse #2
Genotype		
Allele combinations		

#### Offspring Mice

Genotype	Fraction

Phenotype	Fraction

## Sex-linked Cross

### KEY

R = red eyes  
r = white eyes

5. Cross a red-eyed female (homozygous) with a red-eyed male.

Female parent genotype: X X

Male parent genotype: X Y

Female offspring:

Genotype	Fraction
Phenotype	Fraction

Genotype	Fraction
Phenotype	Fraction

6. Cross a red-eyed female (heterozygous) with a white-eyed male.

Female parent genotype: X X

Male parent genotype: X Y

Female offspring:

Genotype	Fraction
Phenotype	Fraction

Genotype	Fraction
Phenotype	Fraction

## Blood Types

7. Cross someone with B+ (BO+-) with someone with A+ (AA+-).

Blood type cross


Phenotypes(%):

Rh-factor cross


Phenotypes (%):