Name: _____ Date: _____ Period: _____

Complete Dominance- Mendelian Genetics

Directions: *Read each problem carefully. Choose a letter to represent the trait and list the genotypes for the parental generation (P). Fill in the Punnett Square and show the genotypic ratio and the phenotypic ratio for each cross.*

Fill out the table below using your notes or the text.

Term	Definition	In your own words…	How will you remember?
Homozygous			
Heterozygous			
Phenotype			
Genotype			
Allele			
Dominant			
Recessive			

1. In rabbits, black fur is dominant over white fur. Show the cross of a heterozygous black male with a homozygous white female.

   P (parent genotypes): _____ x _____

   Genotypic ratio: ____:____:_____

   Phenotypic ratio: ____:____

2. Tall is dominant over short in pea plants. Show the cross between a homozygous short plant and a homozygous tall plant.

   P:

   Genotypic ratio:

   Phenotypic ratio:

3. In humans, free-ear lobes are dominant to attached lobes. Two parents that are both heterozygous free are expecting a child. Show the probabilities for this cross.

P:

Genotypic ratio:

Phenotypic ratio:

4. Wrinkled seed are recessive to smooth seeds. Show a plant that produces pure smooth seeds crossed with a heterozygous smooth seed producing plant.

P:

Genotypic ratio:

Phenotypic ratio:

5. As in the previous problem… Show a heterozygous smooth plant crossed with another heterozygous smooth seed producing plant.

P:

Genotypic ratio:

Phenotypic ratio:

6. Blue eyes are dominant to red eyes in rabbits. Show a heterozygous blue-eyed rabbit crossed with a red-eyed rabbit.

P:

Genotypic ratio:

Phenotypic ratio:

7. In mice, red eyes are dominant over black eyes. Show a cross between two black-eyed mice.

P:

Genotypic ratio:

Phenotypic ratio:
