Honors Biology **Keep to study!**
Unit 5: Patterns of Inheritance

Name: _____ Period: _____

5.3 Part I: Punnett Squares Practice Review

A. Determining Parent Game Questions: Given each scenario, write the genotypes and gametes for both parents.

1. An albino female mouse mates with a heterozygous black male mouse. Black is caused by a dominant allele (B) and albino is caused by a recessive allele (b).

Genotypes
Father: Bb
Mother: _____

Gametes
Father: B and b
Mother: _____

2. A straight winged female fruit fly mates with a homozygous curly winged fruit fly. Straight wings are recessive (s) and curly wings are dominant (S).

Genotypes
Father: _____
Mother: _____

Gametes
Father: _____
Mother: _____

3. A homozygous striped female zebrafish mates with a leopard spotted male zebrafish. The striped phenotype is caused by a dominant allele (Z) and the leopard spotted phenotype is caused by a recessive allele (z).

Genotypes
Father: _____
Mother: _____

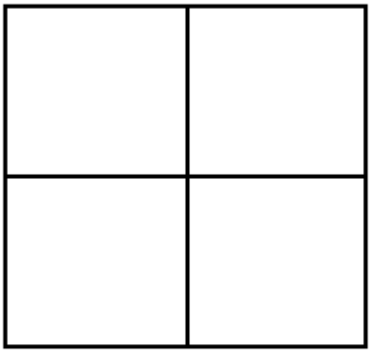
Gametes
Father: _____
Mother: _____

B. Determining Possible Offspring Genotypes & Phenotypes Questions:

1. A homozygous grey-feathered female zebra finch mates with a "penguin" colored (white and gray patterned like a penguin) male zebra finch. The grey phenotype is caused by a dominant allele (F) and the penguin phenotype is caused by a recessive allele (f). What are the genotypes of their possible offspring? What are the phenotypes of their possible offspring?

Genotypes
Father: _____
Mother: _____

Genotypes
Father: _____
Mother: _____



Offspring GENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____
_____	_____	_____

Offspring PHENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____

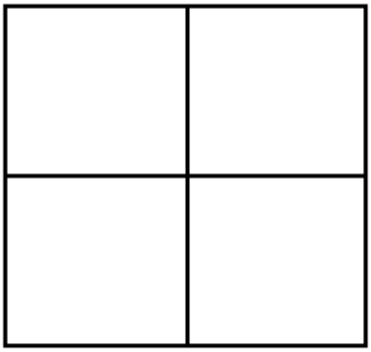
2. A homozygous normal colored male zebrafish mates with a homozygous normal colored female zebrafish. The normal colored phenotype is caused by a dominant allele (A) and the colorless phenotype is caused by a recessive allele (a). What are the genotypes of their possible offspring? What are the phenotypes of their possible offspring?

Genotypes
Father: _____
Mother: _____

Genotypes
Father: _____
Mother: _____

Offspring GENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____
_____	_____	_____

Offspring PHENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____



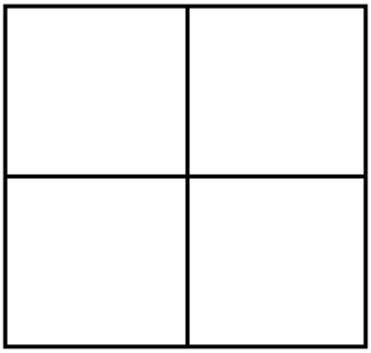
3. A homozygous winged fruit fly male mates with a heterozygous winged female fruit fly. The normal winged phenotype is caused by a dominant allele (W) and the wingless phenotype is caused by a recessive allele (w). What are the genotypes of their possible offspring? What are the phenotypes of their possible offspring?

Genotypes
Father: _____
Mother: _____

Genotypes
Father: _____
Mother: _____

Offspring GENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____
_____	_____	_____

Offspring PHENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____



4. A heterozygous normal tailed male zebrafish mates with another heterozygous normal tailed female zebrafish. The normal tailed phenotype is caused by a dominant allele (T) and the long finned tail phenotype is caused by a recessive allele (t). What are the genotypes of their possible offspring? What are the phenotypes of their possible offspring?

Genotypes
Father: _____
Mother: _____

Genotypes
Father: _____
Mother: _____

Offspring GENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____
_____	_____	_____

Offspring PHENOtypes	Fractions	Percentages
_____	_____	_____
_____	_____	_____