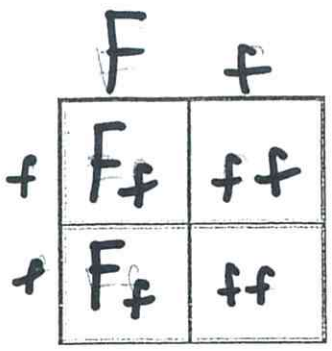

4. If the mother is homozygous recessive, and the father is heterozygous.

ff Ff

50% 50%

a) Write the genotype probabilities.

Ff / ff

b) Write the phenotype probabilities.

Black 50% Gray 50%

Show Punnet Squares below for 1-5.

Problem #1 - Use a Punnett square to predict the genotypic and phenotypic outcome (offspring) of a cross between two heterozygous/hybrid tall (Tt) pea plants

Problem #2 - In pea plants, yellow peas are dominant over green peas.
Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between a plant heterozygous/hybrid for yellow (Yy) peas and a plant homozygous/purebred for green (yy) peas.

Problem #3 - In pea plants, yellow peas are dominant over green peas.
Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between a plant heterozygous for yellow peas and a plant homozygous dominant.

Problem #4 - In pea plants, round peas are dominant over wrinkled peas.
Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between a pure round plant and a pure wrinkled plant.

Problem #5 - In pea plants, round peas are dominant over wrinkled peas.
Use a Punnett square to predict the phenotypic and genotypic outcome (offspring) of a cross between two hybrid plants for round peas.

1.)

	T	t
T	TT	Tt
t	Tt	tt

Genotypes: TT, Tt, tt

Phenotypes: Hybrid / tall

2.)

	Y	y
y	Yy	yy
y	Yy	yy

Genotypes: Yy, yy

Phenotypes: yellow 50%

3.)

	P	P
P	PP	PP
p	Pp	Pp

Genotypes: PP / Pp

Phenotypes: Yellow 50% Green 50%

25 or 25

	P	P
P	Pp	Pp
p	Pp	Pp

Genotype: Pp

Phenotype: Round: 100%

	R	r
R	RR	Rr
r	Rr	rr

Genotype: RR, Rr, rr

phenotype: round 75% wrinkled 25%