Monohybrid Punnett Square Notes

I). Genetics Review:

Define the following with your own words and give an example:

1. Phenotype:_____

2. Genotype:_____

For each of these circle the genes that correspond to the question being asked

a). Express the dominant trait

Hh TT aa Bb rr

b). Express the recessive trait

Hh TT aa Bb rr

c). Homozygous dominant

Aa TT tt yy Pp

d). Homozygous recessive

Aa TT tt yy Pp

e). Heterozygous

Aa TT tt yy Pp

II). Punnett Squares:

1. Components of a monohybrid punnett square:

a. The _____ on the outside of the punnett square represent gene's from the _____.

b. When filled in, the letter's on the _____ of punnett square represents the possible combinations of the genotype of the _____.

2. Filling in Punnett Squares:

In humans, dark colored hair, D, is dominant to light colored hair, d. Complete the following Punnett square.

- Dad has dark hair with a genotype of (DD), and mom has light hair with a genotype of (dd).

Expected number of offspring:

_____ Dark hair (DD or Dd) _____% of the offspring will have dark hair

_____ Light hair (dd) _____ % of the offspring will have light hair

III). Monohybrid Cross Problems:

1. Brown eyes (B) are dominant over blue eyes (b). A man who is heterozygous with brown eyes marries a woman who is homozygous dominant for brown eyes. What will be the genotype and phenotype of the first generation?

P_1

F_1

2. In flowers round peas (R) are dominant over wrinkled peas (r). What would be the genotype and phenotype of the first generation if a plant with wrinkled peas was crossed with a plant that was heterozygous?

P_1

F_1