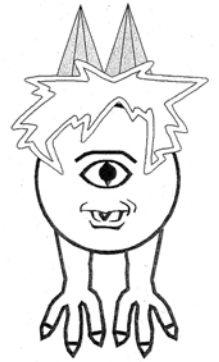


NAME:

PERIOD:

Dihybrid Zork Crosses



BACKGROUND: After looking at our family of zorks, we are now going to look at the possibility of what the children of the zork family will look like with two traits at a time. This is known as a double cross. When we segregate the alleles in this case we will have four different **phenotypes** and nine different **genotype** possibilities. We will still use the terms **heterozygous** and **homozygous**. You will use the information from the zork genetics sheet.

1. Tork is homozygous for being tall(TT) and for having one leg(NN). Vorkina is short(tt) and has two legs (nn).

A. What are the chances their daughter, Torkina, will be tall with one leg?

Height

Legs

Chances of being tall: _____ x Chances of having one leg: _____ = _____ Chance of being tall with one leg

2. Tork is heterozygous for purple lips and has thin eyebrows. Vorkina is also heterozygous for purple lips with thin eyebrows. Purple lips (L) are dominant over Green (l) and Thick eyebrows (E) are dominant over thin (e)

A. What are the chances their daughter, Torkina, will have green lips with thin eyebrows?

Lips

Eyebrows

Chances of green lips: _____ x Chances of having thin eyebrows: _____ = _____ Chance of green lips and thin eyebrows

3. Torky is heterozygous tall and heterozygous for green hair. His wife, Morkalina as you remember is short and has yellow hair. Tall is dominant over short and Green is dominant over Yellow

A. What are the chances young Morky will be short with green hair?

Height

Hair Color



Chances of being short: _____ x Chances of having green hair: _____ = _____ Chance of being short with green hair

4. Spork and Vorki are both heterozygous tall and have three eyes. Three eyes are recessive to one eye.

A. What are the chances their son, Sporki, will be short with three eyes?

Height

Eyes

Chances of being short: _____ x Chances of having three eyes: _____ = _____ Chance of being short with three eyes

5. Spork is homozygous for two horns, and has no wings. Vorki is heterozygous for two horns and heterozygous for wings. Having one horn is recessive, while having wings is dominant.

A. What are the chances their son, Sporki, will have two horns and wings?

Horns

Wings

Chances of having 2 horns: _____ x Chances of having wings: _____ = _____ Chance of having two horns and wings