

Honors Biology – Genetics Mixed Review Worksheet

For each of the following:

- Identify the genotypes of the parents
 - Complete a Punnett Square
 - Give the genotypic AND phenotypic results of the cross (percentage OR ratio)
1. In fruit flies, long wings are dominant to short wings. Complete a cross between a short winged male and a heterozygous female.
 2. In certain flowers, blue and yellow flowers are incompletely dominant to each other. Show the cross between a pure blue flower and a pure yellow flower.
 3. Using the same flowers as in #2, cross a green flower with a yellow flower.
 4. In some species of wildcats, blue stripes and purple spots are codominant. Show the cross between a male with stripes and a female with spots and stripes.
 5. In humans, blood type is controlled by multiple alleles – A, B & O. Show the cross between a male with Type O blood and a woman with Type AB blood. What blood types will NOT show up in their offspring?
 6. In humans, male pattern baldness is an X-linked trait. Show the cross between a male that is not bald and a female that is a carrier.
 7. In some chickens the gene for feather color is controlled by codominance. Feather are either black or white. The heterozygous condition is called erminette. Show the cross between a rooster with black feathers and an erminette female.
 8. In cats, coat color is controlled by a codominant, sex-linked gene. Calico cats have both orange and black splotches on their white coat. Show the cross between an orange splotched male and a calico female.
 9. Oompahs Loomphas generally have blue faces which is caused by a dominant gene. The recessive condition results in an orange face. Show the cross between an orange faced male and a heterozygous female.
 10. Oompahs can have red, blue or purple hair. Purple hair results from the heterozygous condition. Show the cross between a blue haired male and a purple haired female.