

Solve each problem and show all your work:

1. In fruit flies, long wings are dominant to short wings. If a male fruit fly with heterozygous long wings is mated with a short winged female, what will the offspring look like? ((Show all 5 parts: 1. Key 2. Equation 3. Punnett Square 4. Genotype 5. Phenotype):

= Long Wings

_____ x _____

Genotype Phenotype

= short Wings

2. If horned cattle are dominant to non-horned cattle, what would the calves look like if a non-horned bull is bred with a homozygous horned female?

= Horns

_____ X _____

= Non-Horns

Genotype Phenotype

3. If a rough coat is dominant to a smooth coat in Schnauzers, what would the offspring look like if a homozygous rough coat female is bred with a heterozygous rough coat male?

= Rough Coat

_____ X _____

Genotype Phenotype

= Smooth Coat

4. In Collies, Brown fur is incompletely dominant to cream colored fur. The heterozygous condition results in the color sable. What would the puppies look like if a sable male mated with a cream colored female?

= Brown Fur

_____ X _____

= Cream Fur

Genotype Phenotype

= Sable Fur

5. In humans the lack of skin pigment is a recessive trait known as albinism. Having skin pigment is the dominant trait. What would the genotypes be of the children from a heterozygous male and an albino female?

= Having Skin Pigment

_____ X _____

= Not Having skin Pigment

Genotype Phenotype

6. In golden eagles, raptorial feet are dominant to "flat feet." If a heterozygous raptorial footed male mates with a flat footed female, what would the genotype be?

= Raptorial Feet

_____ X _____

= Flat Feet

Genotype Phenotype

7. In polar bears, short whiskers are dominant to long whiskers. If a homozygous short whiskered male is mated with a long whiskered female, what would the cubs look like?

= Short Whiskers	_____	X	_____		
= Long Whiskers				Genotype	Phenotype

8. If the trait long tail is dominant to short tail, and a long tailed male is bred with a long tailed female, and their offspring have: 3 long tailed and 1 short tailed. What are the genotypes of the whole family?

= Long Tail	_____	X	_____		
= Short Tail				Genotype	Phenotype