

Name: _____

Class Period: _____



Punnett Square Practice: Minion Genetics

Gru has asked Dr. Nefario to help him get the best Minions possible. He wants to find out which traits are more likely to be seen in his Minions. He is going to observe the phenotypes and then use his special science tool to help him predict genotypes of future Minion populations.

What is the name of the special science tool he can use to predict genetic outcomes? _____

Phenotypes are _____.

Circle the phenotypes in the list below:

two eyes EE combed hair sprout hair Hh hh one eye ee

Genotypes are the combination of alleles that determine a trait. Circle the genotypes in the list below:

sprout hair Hh EE one eye ee two eyes hh combed hair

A dominant trait is _____.

A recessive trait is _____.

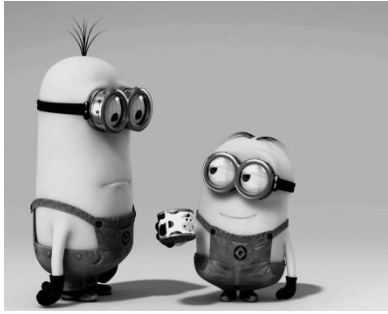
Look at the genotypes below and tell whether it is a heterozygous or homozygous genotype. Then, label each genotype as showing a dominant or recessive phenotype.

Genotype	Heterozygous or Homozygous?	Dominant or Recessive Phenotype?
EE	_____	_____
Ee	_____	_____
tt	_____	_____
Tt	_____	_____
hh	_____	_____
HH	_____	_____

Predicting the Outcome:



Having two eyes (E) is dominant over one eye (e) in Minions. Make a Punnett Square for the cross of a heterozygous female Minion with a one-eyed male Minion. Give the possible genotype and phenotype outcomes in a percent ratio.



Hair (H) in Minions is a trait to be admired. Having sprout hair is dominant to combed down hair. Show a cross between a homozygous mom with sprout hair and a purebred dad with sprout hair. Give the genotype and phenotype ratios for the offspring.

Short phenotypes are a recessive trait in Minions. Show the cross between two hybrid Minions and answer the questions below.

T =
t =

What is the genotype of the mom? _____

What is the genotype of the dad? _____

What is the percent chance of having a short baby? _____

What is their possible genotype? _____

What is the percent chance of having a homozygous tall baby? _____

What is the percent chance of having a heterozygous tall baby? _____

What is the chance that these parents can have a purebred baby? Explain your answer. _____
