Genetics Name:

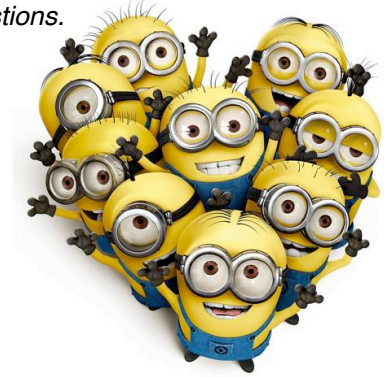
Minion Genetics Period:

Dr. Nefario is trying to get his lab notes organized. He wants to find out which minion traits are common, and which minion traits are rare. Dr. Nefario plans upon doing this by observing their phenotypes, and then predicting their genotypes with the help of his machines. You can use Chapter 6 of your book to help you analyze Dr. Nefario's work.

Phenotypes are traits that you can see. In the following list, circle the phenotypes:

two eyes EE long hair short hair Hh hh one eye ee

Dominant traits are the "stronger" traits; these tend to show up a lot. Recessive traits are the "weaker" traits that usually are not seen as much. *Look at the picture of minions below and use it to answer the questions.*



Is having two eyes a dominant or recessive minion trait? _____

Is having one eye a dominant or recessive minion trait? _____

Genotypes are letter codes that stand for traits. In the following list, circle the genotypes:

short hair Hh EE one eye ee two eyes hh long hair

Dominant traits are represented by a CAPITAL letter, and recessive traits by a lowercase letter. If a CAPITAL letter shows up in a genotype, that means that the dominant trait will be seen in the organism. Dr. Nefario decides to look at the characteristic of the number of eyes a minion has. If he decides that having two eyes is the dominant trait, he will use the code "E" to show that the minion has two eyes. This means that having one eye would be the recessive trait, so he would need to use the code "e" to show that a minion has one eye. If a dominant trait shows up anywhere in the genotype (once or twice), it will show up in the phenotype. For a recessive trait to show up in the phenotype, it would need to show up twice in the genotype.

Look at the genotypes below, and write whether you would see the <u>dominant</u> or <u>recessive</u> phenotype:

BB _____

Pp _____

nn _____

Mm _____

dd _____

AA _____