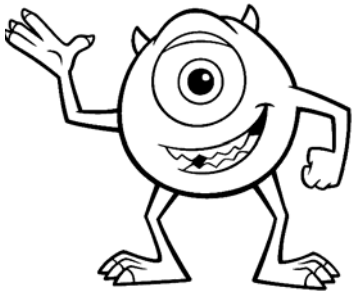
Name_____

Monster Genetics

	Genotype	***Phenotype***
 Mike	Gg	Green body color
	ee	One eye
	CC	Clawed toes
	Ff	Four fingers

	Genotype	***Phenotype***
 Sulley	Pp	Blue & purple body color
	Hh	Horned ears
	bb	Blue eyes
	LL	Long hair

1. Which of Mike's traits are heterozygous?

   _____

2. Which of Mike's traits are homozygous recessive?

   _____

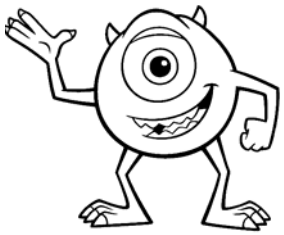
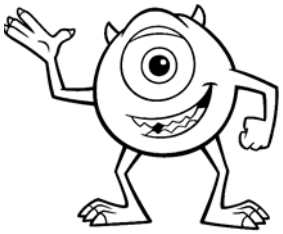
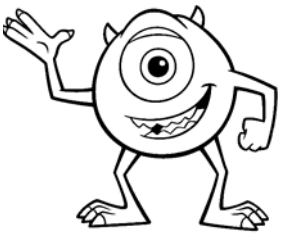
3. Which of Sulley's traits are homozygous dominant?

   _____

Given this information for monsters of Mike's species:

- Green body color [G] is dominant to yellow body color [g].
- Two eyes [E] are dominant to one eye [e].
- Claws on toes [C] are dominant to no claws [c].
- Four fingers [F] are dominant to five fingers [f].

4. Color the monsters with the following genotypes:

GG	***Gg***	***gg***
		

5. Draw and color the monsters with the following genotypes:

Gg / EE / cc / ff	***gg / ee / Cc / FF***

6. Given this information about monsters of Sulley's species:

   - Purple body color [P] is co-dominant with blue body color [p].
   - Horned ears [H] are dominant to no horns [h].
   - Red eyes [B] are dominant to blue eyes [b].
   - Long hair [L] is dominant to short hair [l].

For each phenotype for monsters of Sulley's species, list the possible genotype(s):

Phenotype	***Genotype(s)***
Blue body color	
Purple body color	
Horned ears	
Red eyes	
Long hair	
Short hair	

7. Mike's mother has a genotype of Gg : Ee : Cc : FF
   Mike's father has a genotype of gg : Ee : Cc : ff
   Draw Mike's parents:

Mother	***Father***

8. Explain how a mother and father with two eyes can have one-eyed offspring.

_____

_____

_____

9. Sulley's mother has a genotype of PP : Hh : Bb : ll
Sulley's father has a genotype of Pp : Hh : bb : Ll
Fill in the Punnett Square to show possible genotypes for type of ear for Sulleys brothers and sisters?

Type of Ear		
	H	***h***
H		
h		

What are the possible phenotypes for these genotypes?

10. Fill in the Punnett Square to show the possible genotypes for body color for Sulley's brothers and sisters.

Body Color		
	P	***P***
P		
p		

What are the possible body color phenotypes, and the probability for each phenotype?