Monster Genetics

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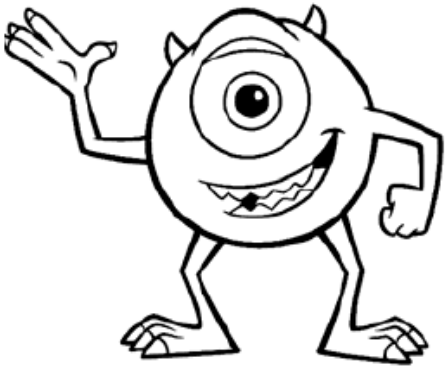


Mike

Genotype	Phenotype
Gg	Green Body Color
ee	One Eye
CC	Clawed toes
Ff	Four fingers

Sulley

Genotype	Phenotype
pp	Blue Body
Hh	Horns
bb	Blue eyes
LL	Long Hair

1. Which of Mike's traits are heterozygous?

_____

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

_____

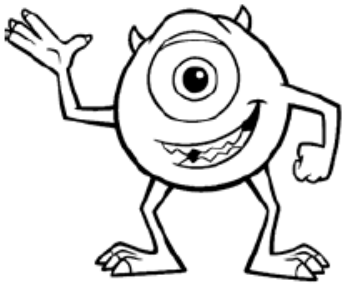
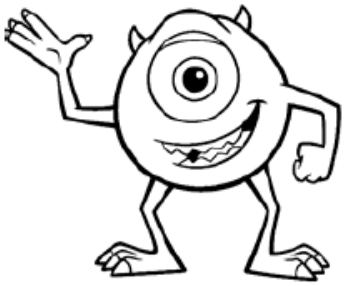
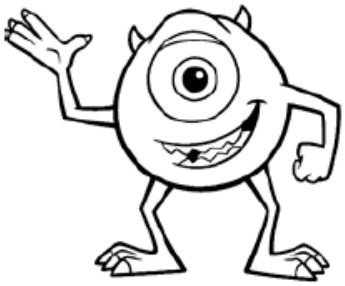
3. Whuch of Sulley's traits are homozygous dominant?

_____

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***

Given this information for monsters of Sulley's species:

- Purple body color [P] is dominant to blue body color [p]
- Horns [H] are dominant to no horns [h]
- Red eyes [R] are dominant to blue eyes [r]
- Long hair [L] is dominant to short hair [l]

6. 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?