**Monster Lab**

**Part 2: Procedure**

The female monster and male monster marry and plan to have baby monsters. They are interested in finding out the probabilities of which traits their offspring will have.

1. Complete Punnett squares for each trait that would result from a cross between the two monsters.
2. Write the possible genotypes and their probability on the right side of each Punnett Square.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Face Shape |  |  |  | Body Shape |  |  |  | Number of Arms |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Number of Legs |  |  |  | Fur Type |  |  |  | Fur Color |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |
| Eye Shape |  |  |  | Eye Color |  |  |  | Teeth |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |
| Ear Shape |  |  |  | Nose Shape |  |  |  | Tail Shape |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |
| Tail Color |  |  |  | Horns |  |  |  | Horn Color |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

1. To determine the genotype of the baby monster, use a paperclip and pencil to make a spinner. Put your pencil point over the paperclip in the center of the first Punnett square to make a spinner. Flick the paperclip while holding the pencil steady. The paperclip should begin to spin around furiously and eventually stop on one of the squares. Write the genotype where the paperclip stopped in the table below. Write the phenotype and the probability for that phenotype. Repeat the process for each trait.

**Baby Monster Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Trait** | **Genotype** | **Phenotype** | **Phenotype Probability** |
| Face Shape |  |  |  |
| Body Shape |  |  |  |
| Number of Arms |  |  |  |
| Number of Legs |  |  |  |
| Fur Type |  |  |  |
| Fur Color |  |  |  |
| Eye Shape |  |  |  |
| Eye Color |  |  |  |
| Teeth |  |  |  |
| Ear Shape |  |  |  |
| Nose Shape |  |  |  |
| Tail Shape |  |  |  |
| Tail Color |  |  |  |
| Horns |  |  |  |
| Horn Color |  |  |  |

1. List three traits your baby monster has that are homozygous and tell if these are homozygous dominant or homozygous recessive.

a.

b.

c.

1. Are there traits that neither parent has but the offspring has? Explain how this is possible even if it did not occur in your baby monster.

6. Draw your baby monster on a separate sheet of blank paper.