

Name \_\_\_\_\_

Date \_\_\_\_\_

Genetics Practice

Period \_\_\_\_\_



Timmy Turner has been studying genetics at school. He is using this information to figure out the genetics behind Cosmo and Wanda. Help him figure this out.

Define :

Genotype \_\_\_\_\_

Phenotype \_\_\_\_\_

Hybrid \_\_\_\_\_

Pure \_\_\_\_\_

Use the information provided and your knowledge of genetics to answer each question.

1. For each genotype below, indicate whether it is a heterozygous (HE) or homozygous (HO) genotype.

- |             |             |             |             |
|-------------|-------------|-------------|-------------|
| a. TT _____ | b. Bb _____ | c. DD _____ | d. Ff _____ |
| e. tt _____ | f. dd _____ | g. Dd _____ | h. ff _____ |
| i. Tt _____ | j. bb _____ | k. BB _____ | l. FF _____ |

2. Which of the genotypes in #1 would be considered purebred?

\_\_\_\_\_

3. Which of the genotypes in #1 would be considered hybrids?

\_\_\_\_\_



4. Determine the phenotype for each genotype using the information provided about fairies

a. Pink hair color is dominant to green hair color.

PP \_\_\_\_\_ Pp \_\_\_\_\_ pp \_\_\_\_\_

b. Long wings are dominant to short wings.

WW \_\_\_\_\_ Ww \_\_\_\_\_ ww \_\_\_\_\_

c. Three fingers is dominant to four fingers.

FF \_\_\_\_\_ Ff \_\_\_\_\_ ff \_\_\_\_\_

d. Green eyes is dominant to pink eyes

GG \_\_\_\_\_ Gg \_\_\_\_\_ gg \_\_\_\_\_

5. For each phenotype, give the genotypes that are possible for a fairy.

a. Blue wings (B) is dominant to clear wings (b)

Blue wings \_\_\_\_\_ Clear wings \_\_\_\_\_

b. Round eyes (R) is dominant to oval eyes (r).

Round eyes \_\_\_\_\_ Oval eyes \_\_\_\_\_

c. Curly hair (H) is dominant to straight hair (h).

Curly hair \_\_\_\_\_ Straight hair \_\_\_\_\_



6. Using the information above, figure out Cosmo's possible genotype(s) for each trait.

<u>Phenotype</u>	<u>Possible genotypes</u>
a. Green hair	_____
b. Short wings	_____
c. Four fingers	_____
d. Green eyes	_____
e. Clear wings	_____
f. Round eyes	_____
g. Straight hair	_____

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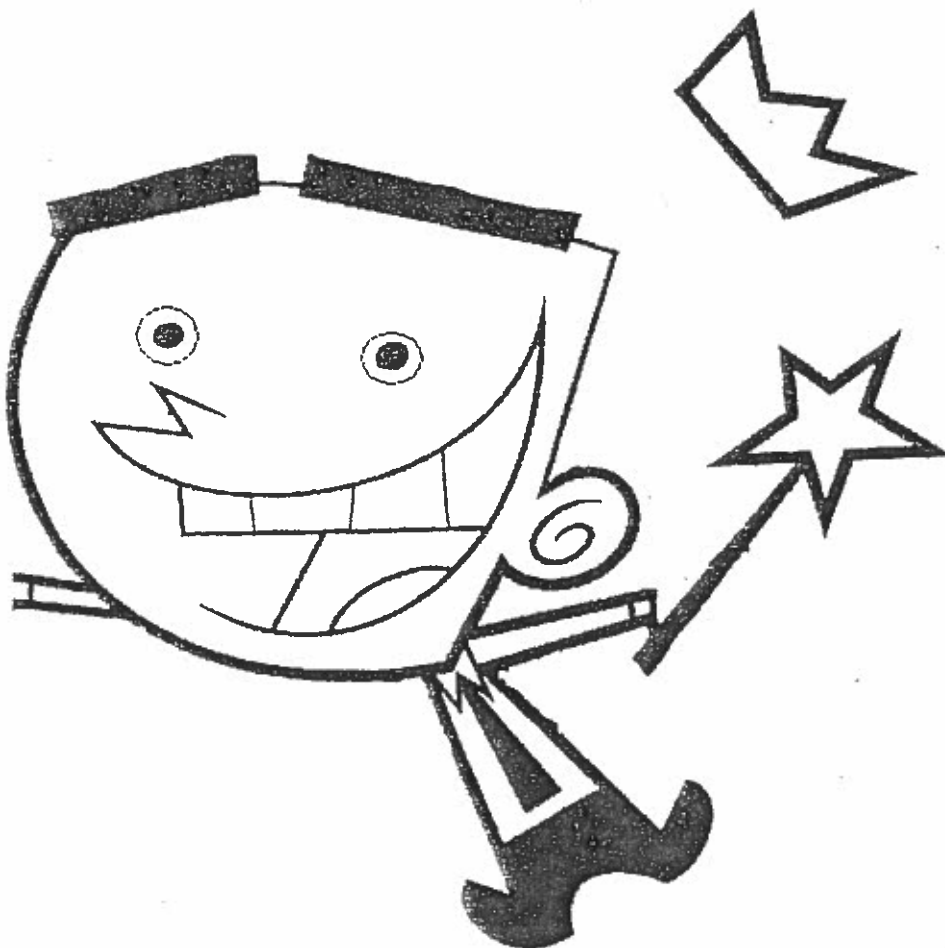
Create a Fairy

Period \_\_\_\_\_

Use the information from your genetics practice to create your own fairy.

- Pick a phenotype for each of the characteristics in the table. Choose a mixture of dominant and recessive traits.
- Identify all of the possible genotypes for that phenotype.
- Draw and color your fairy based on the table you have filled in.

Trait	Phenotype	Genotype(s)
Hair Color		
Hair Texture		
Wing Size		
Wing Color		
Number of Fingers		
Eye Color		
Eye Shape		



Fairy Name \_\_\_\_\_

