

Name: \_\_\_\_\_ Period: \_\_\_\_\_



## 5.4 Complex Patterns Practice #2

### Bikini Bottom Codominance and Incomplete Dominance

SpongeBob loves growing flowers for his pal Sandy. Her favorite flowers, Poofkins, are found in red, blue, and purple in color. Both red ( $P^R$ ) and blue ( $P^B$ ) phenotypes are dominant, while purple is the result of INCOMPLETE DOMINANCE of the two dominant phenotypes. To answer the following, use your knowledge of INCOMPLETE DOMINANCE.

1. Write the correct genotype for each color if  $P^R$  represents a red allele and  $P^B$  represents a blue allele.

Red = \_\_\_\_\_      Blue = \_\_\_\_\_      Purple = \_\_\_\_\_

2. What would happen if SpongeBob crossed a Poofkin with red flowers with a Poofkin with blue flowers?

Genotypic Ratio:


Phenotypic Ratio:

3. What would happen if SpongeBob crossed two Poofkins with purple flowers?

Genotypic Ratio:


Phenotypic Ratio:

4. What would happen if SpongeBob crossed a Poofkin with purple flowers with a Poofkin with blue flowers? Complete the Punnett square to show the probability (in percent) of each flower color.

Genotypic Ratio:


Phenotypic Ratio:

**SpongeBob and his pal Patrick love to go jellyfishing! Bikini Bottom typically has green jellyfish (G) or blue jellyfish (B), but it is also home to a very special kind of jellyfish known as Goobers, a spotted jellyfish that is green and blue due to CODOMINANCE. Use your knowledge of CODOMINANCE to answer the following.**

5. Write the correct genotype for each color if R represents a red allele and B represents a blue allele.

Green= \_\_\_\_\_ Blue = \_\_\_\_\_ Goobers = \_\_\_\_\_

6. What would happen if SpongeBob and Patrick crossed two "goobers"?

Genotypic Ratio:

Phenotypic Ratio:




7. What would happen if they crossed a green jellyfish with a Goober?

Genotypic Ratio:

Phenotypic Ratio:


8. What would happen if they crossed a blue jellyfish with a green jellyfish?

Genotypic Ratio:

Phenotypic Ratio:


9. What would happen if they crossed a blue jelly with a Goober?

If 100 jellyfish babies are produced from this cross,  
how many would you expect for each color?

Green = \_\_\_\_\_

Blue = \_\_\_\_\_

Goober = \_\_\_\_\_
