



Bikini Bottom Genetics#2

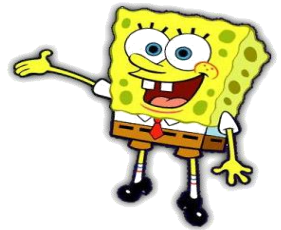
Name _____ Per _____

1. SpongeBob SquarePants recently met SpongeSusie Roundpants at a dance. SpongeBob is heterozygous for his square shape, but SpongeSusie is round. Square shape is dominant to round. Create a Punnett square to show the possibilities that would result if SpongeBob and SpongeSusie had children.

Legend	Parents	Cross it	Offspring Genotype Possibilities	Offspring Phenotype Possibilities

A. What are the chances of a child with a square shape? ____ out of ____ or ____%

B. What are the chances of a child with a round shape? ____ out of ____ or ____%



2. Patrick met Patty at the dance. Both of them are heterozygous for their pink body color, which is dominant over a yellow body color. Create a Punnett square to show the possibilities that would result if Patrick and Patty had children.

Legend	Parents	Cross it	Offspring Genotype Possibilities	Offspring Phenotype Possibilities



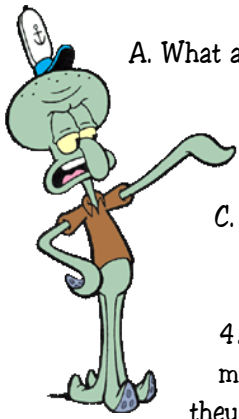
A. What are the chances of a child with a pink body? ____ out of ____ or ____%

B. What are the chances of a child with a yellow body? ____ out of ____ or ____%



3. Everyone in Squidward's family has light blue skin, which is the dominant trait for body color in his hometown of Squid Valley. His family brags that they are a "purebred" line. He recently married a nice girl who has light green skin, which is a recessive trait. Create a Punnett square to show the possibilities that would result if Squidward and his new bride had children. Use B to represent the dominant gene and b to represent the recessive gene.

Legend	Parents	Cross it	Offspring Genotype Possibilities	Offspring Phenotype Possibilities



A. What are the chances of a child with light blue skin? _____%

B. What are the chances of a child with light green skin? _____%

C. Would Squidward's children still be considered purebreds? Explain!

4. Assume that one of Squidward's sons from problem #3, who is heterozygous for the light blue body color, married a girl that was also heterozygous. Create a Punnett square to show the possibilities that would result if they had children.

Legend	Parents	Cross it	Offspring Genotype Possibilities	Offspring Phenotype Possibilities

A. What are the chances of a child with light blue skin? _____%

B. What are the chances of a child with light green skin? _____%

5. Mr. Krabbs and his wife recently had a Lil' Krabby, but it has not been a happy occasion for them. Mrs. Krabbs has been upset since she first saw her new baby who had short eyeballs. She claims that the hospital goofed and mixed up her baby with someone else's baby. Mr. Krabbs is homozygous for his tall eyeballs, while his wife is heterozygous for her tall eyeballs. Some members of her family have short eyes, which is the recessive trait. Create a Punnett square using T for the dominant gene and t for the recessive one.

Legend	Parents	Cross it	Offspring Genotype Possibilities	Offspring Phenotype Possibilities

A. Did the hospital make a mistake? Explain your answer.

