

Bikini Bottom Genetics 2

Name _____

Use your knowledge of genetics to complete this worksheet.

1. Use the information for SpongeBob's traits to write the phenotype (physical appearance) for each item.

| Trait | Dominant Gene | Recessive Gene |
|------------|-----------------|----------------|
| Body Shape | Squarepants (S) | Roundpants (s) |
| Body Color | Yellow (Y) | Blue (y) |
| Eye Shape | Round (R) | Oval (r) |
| Nose Style | Long (L) | Stubby (l) |

- (a) LL- _____ (e) Rr- _____
 (b) yy- _____ (f) ll- _____
 (c) Ss- _____ (g) ss- _____
 (d) RR - _____ (h) Yy - _____

2. Use the information in the chart above to write the genotype (or genotypes) for each trait below.



- (a) Yellow body - _____ (e) Stubby nose - _____
 (b) Roundpants - _____ (f) Round eyes - _____
 (c) Oval eyes - _____ (g) Squarepants - _____
 (d) Long nose - _____ (h) Blue body - _____

3. Determine the genotypes for each using the information in the chart above.

- (a) Heterozygous round eyes - _____ (c) Homozygous long nose - _____
 (b) Purebred squarepants - _____ (d) Hybrid yellow body - _____

4. One of SpongeBob's cousins, SpongeBillyBob, recently met a cute squarepants gal, SpongeGerdy, at a local dance and fell in love. Use your knowledge of genetics to answer the questions below.

(a) If SpongeGerdy's father is a heterozygous squarepants and her mother is a roundpants, what is her genotype? Complete the punnett square to show the possible genotypes that would result to help you determine Gerdy's genotype.

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What is Gerdy's genotype? _____

(b) SpongeBillyBob is heterozygous for his squarepants shape. What is his genotype? _____

(c) Complete the punnett square to show the possibilities that would result if Billy Bob & Gerdy had children.

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|---|---|---|
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(d) List the possible genotypes and phenotypes for the kids.

- (e) What is the probability of kids with squarepants? _____ %
 (f) What is the probability of kids with roundpants? _____ %