What Color is the Pod?

Name: Date: Assignment #: Block:

Green (G) is the dominant color for pods of peas plants. Yellow (g) is recessive.

1. What are the phenotypes of the following genotypes?
   1. GG Green
   2. Gg Green
   3. gg yellow
2. Fill in the Punnet squares below to show the outcomes of the crosses. Next to each genotype write the correct phenotype.

A. GG X Gg B. GG X gg

|  |  |
| --- | --- |
| GG  Phenotype: | Gg  Phenotype: |
| GG  Phenotype: | Gg  Phenotype: |

|  |  |
| --- | --- |
| Gg  Phenotype: | Gg  Phenotype: |
| Gg  Phenotype: | Gg  Phenotype: |

C. Gg X Gg A. Gg X gg

|  |  |
| --- | --- |
| GG  Phenotype: | Gg  Phenotype: |
| Gg  Phenotype: | gg  Phenotype: |

|  |  |
| --- | --- |
| Gg  Phenotype: | Gg  Phenotype: |
| gg  Phenotype: | gg  Phenotype: |

Punnet Square Practice: Complete each Punnet square. Then write the probability, in %, of each phenotype and genotype below. Key: T—Tall, t—Short; Y—Yellow seeds, y—Green Seeds; S—Short Hair, s—Long Hair

Genotype: TT

# 1.

|  |  |
| --- | --- |
| Tt | Tt |
| Tt | Tt |

1. TT 0

Genotype: tt

1. Tt 100
2. tt 0
3. Tall 100
4. Short 0
5. Genotype: Yy

Genotype: yy

|  |  |
| --- | --- |
| Yy | yy |
| Yy | yy |

* 1. YY 00
  2. Yy 50
  3. yy 50
  4. Yellow 50
  5. Green 50

1. Genotype: ss

|  |  |
| --- | --- |
| ss | ss |
| ss | ss |

* 1. SS 00

Genotype: ss

* 1. Ss 00
  2. ss 100
  3. Short 100
  4. Long 00

Genotype: Tt

# 2.

Genotype: Tt

|  |  |
| --- | --- |
| TT | Tt |
| Tt | tt |

1. TT 25
2. Tt 50
3. tt 25
4. Tall 75
5. Short 25
6. Genotype: yy

Genotype: yy

|  |  |
| --- | --- |
| yy | yy |
| yy | yy |

* 1. YY 00
  2. Yy 00
  3. yy 100
  4. Yellow 100
  5. Green 00

1. Genotype: Ss

Genotype: ss

|  |  |
| --- | --- |
| Ss | ss |
| Ss | ss |

* 1. SS 00
  2. Ss 50
  3. ss 50
  4. Short 50
  5. Long 50

1. Genotype: Tt

|  |  |
| --- | --- |
| Tt | tt |
| Tt | tt |

* 1. TT 0

Genotype: tt

* 1. Tt 50
  2. tt 50
  3. Tall 50
  4. Short 50

1. Genotype: YY

Genotype: YY

|  |  |
| --- | --- |
| YY | YY |
| YY | YY |

* 1. YY 100
  2. Yy 00
  3. yy 00
  4. Yellow 100
  5. Green 00

1. Genotype: SS

Genotype: Ss

|  |  |
| --- | --- |
| SS | Ss |
| SS | Ss |

* 1. SS 50
  2. Ss 50
  3. ss 0
  4. Short 00
  5. Long 1000