

## Genotype and Phenotype Worksheet

Name \_\_\_\_\_

### Phenotypes and Genotypes of Single Crosses

#### Characteristics:

1. Round seed dominant over wrinkled seed.
2. Yellow seed dominant over green seed.
3. Colored seed coat over white seed coat.
4. Inflated pod over wrinkled pod.
5. Green pod over yellow pod.
6. Long stem over short stem.

#### I. Write the genotype for a single gene for each characteristic.

- |             |       |          |                   |
|-------------|-------|----------|-------------------|
| 1. Round    | _____ | wrinkled | _____ (seed)      |
| 2. Yellow   | _____ | green    | _____ (seed)      |
| 3. Colored  | _____ | white    | _____ (seed coat) |
| 4. Inflated | _____ | wrinkled | _____ (pod)       |
| 5. Green    | _____ | yellow   | _____ (pod)       |
| 6. Long     | _____ | short    | _____ (stems)     |

#### II. Write the genotype for the alleles described.

1. a) Homozygous round seed \_\_\_\_\_.  
b) Heterozygous round seed \_\_\_\_\_.  
c) Wrinkled seed \_\_\_\_\_.
2. a) Homozygous yellow seed \_\_\_\_\_.  
b) Heterozygous yellow seed \_\_\_\_\_.  
c) Green seed \_\_\_\_\_.
3. a) Homozygous colored seed coat \_\_\_\_\_.  
b) Heterozygous colored seed coat \_\_\_\_\_.  
c) White seed coat \_\_\_\_\_.
4. a) Homozygous inflated pod \_\_\_\_\_.  
b) Heterozygous inflated pod \_\_\_\_\_.  
c) Wrinkled pod \_\_\_\_\_.
5. a) Homozygous green pod \_\_\_\_\_.  
b) Heterozygous green pod \_\_\_\_\_.  
c) Yellow pod \_\_\_\_\_.

6. a) Homozygous long stem \_\_\_\_\_.
- b) Heterozygous long stem \_\_\_\_\_.
- c) Short stem \_\_\_\_\_.

III. Write phenotypes for the following genotypes:

1. LL \_\_\_\_\_
2. Gg \_\_\_\_\_
3. rr \_\_\_\_\_
4. li \_\_\_\_\_
5. ii \_\_\_\_\_
7. gg \_\_\_\_\_
8. yy \_\_\_\_\_
9. Yy \_\_\_\_\_
10. GG \_\_\_\_\_
11. Cc \_\_\_\_\_
12. Rr and ii \_\_\_\_\_
13. Gg and Yy \_\_\_\_\_
14. CC and LL \_\_\_\_\_
15. Ll and cc \_\_\_\_\_
16. RR and Ll \_\_\_\_\_