

Name \_\_\_\_\_

Date \_\_\_\_\_

### Warm-Up: Phenotype/Genotype Worksheet

Fill in the symbol that describes each type of allele.

The letter used is traditionally the first letter of the dominant trait. Both the dominant and recessive alleles for each trait are the same letter. The dominant is capital; the recessive is lower case.

Trait	Dominant	Symbol	Recessive	Symbol
Seed shape	Round		wrinkled	
Seed color	Yellow		green	
Pod shape	Smooth		constricted	
pod color	Green		yellow	
Flower Position	Axial		Terminal	
Plant Height	Tall		Short	

**Genotype** – the pair of alleles that make up a gene.

Types (*Homo* = same, *hetero*= different)

**Homozygous dominant** = both alleles are dominant (both *capital* letters)

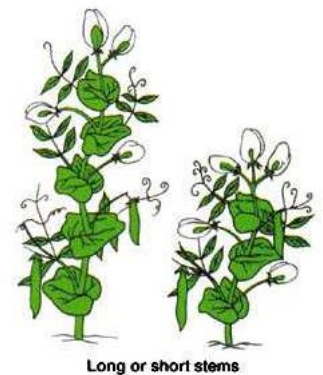
**Homozygous recessive** = both alleles are recessive (both *lower case* letters)

**Heterozygous** = one of each (*one capital, one lower case* letters)

Use the above chart to answer the following answers.

Write the **GENOTYPES** for each gene.

- Homozygous dominant seed shape \_\_\_\_\_
- Homozygous dominant plant height \_\_\_\_\_
- Homozygous recessive seed color \_\_\_\_\_
- Homozygous recessive pod color \_\_\_\_\_
- Heterozygous seed shape \_\_\_\_\_
- Heterozygous pod color \_\_\_\_\_
- Homozygous dominant pod shape \_\_\_\_\_
- Heterozygous pod shape \_\_\_\_\_
- Homozygous recessive pod color \_\_\_\_\_
- Heterozygous plant height \_\_\_\_\_



**Phenotype** – the resulting characteristic of the organism

When alleles are either dominant or recessive – only the dominant trait is expressed (shows up).

If the genotype is **RR** the phenotype is round (both alleles are dominant)

If the genotype is **Rr**, the phenotype is round (one is dominant, one is recessive so the dominant shows up)














If the genotype is **rr**, the phenotype is wrinkled. (both are recessive so the recessive shows up)

Write the **PHENOTYPES** of the previous genotypes.

1. Homozygous dominant seed shape \_\_\_\_\_
2. Homozygous dominant plant height \_\_\_\_\_
3. Homozygous recessive seed color \_\_\_\_\_
4. Homozygous recessive pod color \_\_\_\_\_
5. Heterozygous seed shape \_\_\_\_\_
6. Heterozygous pod color \_\_\_\_\_
7. Homozygous dominant pod shape \_\_\_\_\_
8. Heterozygous pod shape \_\_\_\_\_
9. Homozygous recessive pod color \_\_\_\_\_
10. Heterozygous plant height \_\_\_\_\_

## Seven Different Traits

### 7. Pod color - yellow or green

Flower color	Flower position	Stem length	Seed shapes	Seed color	Pod shapes	Pod color
purple 	axial 	short 	round 	yellow 	inflated 	yellow 
white 	terminal 	tall 	wrinkled 	green 	constricted 	green 