

## Dihybrid Step-By-Step

- Step 1. Read the question carefully.
- Step 2. Find the parents' genotypes.
- Step 3. Find the possible gametes for each parent.
- Step 4. Create Punnett Square and place the gametes along each side. (one parent along the top and the second parent along the left-hand side)
- Step 5. Fill in the Punnett Square
- Step 6. Re-read the question and make sure that you are answering the question being asked.

Example

### Step 1. Read the question carefully.

Question: If a plant with wrinkled, heterozygous green pods is crossed with a heterozygous round, yellow pod plant, what are the possible genotypic and phenotypic ratios of the offspring?

Green, yellow (G)

Round, wrinkled (R)

### Step 2. Find the parents' genotypes.

Parent 1 = rrGg

Parent 2 = Rrgg

### Step 3. Find the possible gametes for each parent.

Parent 1 possible gametes = rG, rg

Parent 2 possible gametes = Rg, rg

### Step 4. Create Punnett Square and place the gametes along each side. (one parent along the top and the second parent along the left-hand side)

	rG	rg
Rg		
rg		

### Step 5. Fill in the Punnett Square

	rG	rg
Rg	RrGg	Rrgg
rg	rrGg	rrgg

\*Remember to keep the same alleles (letters) together and capital goes before lower-case.

### Step 6. Re-read the question and make sure that you are answering the question being asked.

Genotypic Ratio = 25% RrGg, 25% Rrgg, 25% rrGg, 25% rrgg

Phenotypic Ratio = 25% Round, Green; 25% Round, Yellow; 25% Wrinkled, Green; 25% Wrinkled, Yellow