

Patterns of Inheritance

Ch. 11.2

A. Dihybrid cross




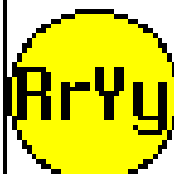




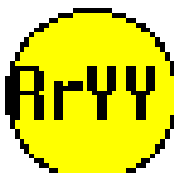


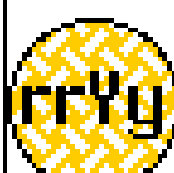
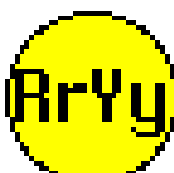


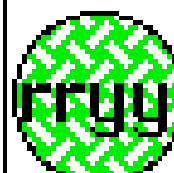
1. 2 traits

2. $WwRr \times WwRr$

3. WR, Wr, wR, wr

4. Phenotypic ratio

F₁ Gametes

	R _Y	R _y	r _Y	r _y
R _Y	 R _Y Y _Y	 R _Y y _Y	 r _Y Y _Y	 r _Y y _Y
R _y	 R _Y y _Y	 R _y y _Y	 r _Y y _Y	 r _y y _Y
r _Y	 R _r Y _Y	 R _r y _Y	 r _r Y _Y	 r _r y _Y
r _y	 R _r y _y	 R _y y _y	 r _r y _y	 r _y y _y

Results

round-yellow : round-green : wrinkled-yellow : wrinkled-green

9 : 3 : 3 : 1

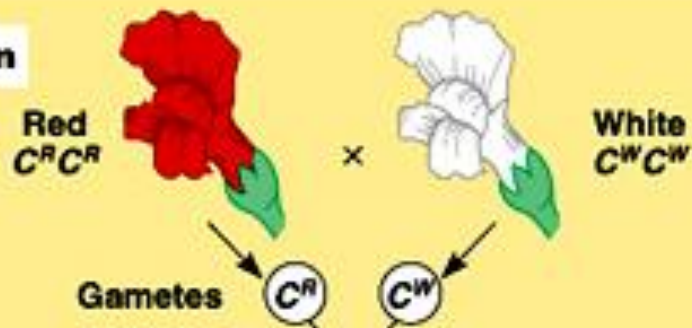
B. Heredity influences

1. Incomplete dominance

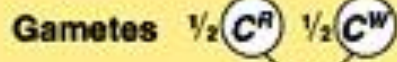
a. Definition

b. Example

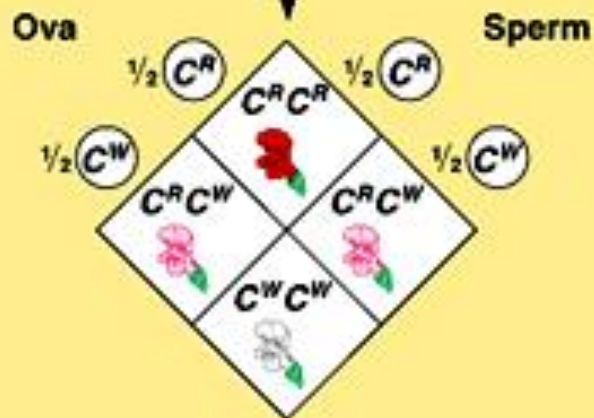
P Generation

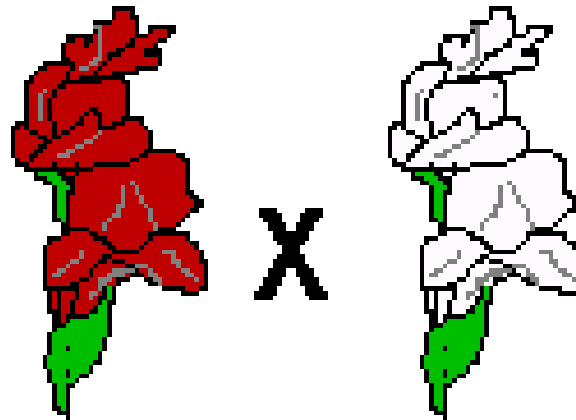


F₁ Generation

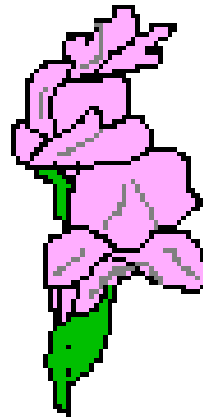


F₂ Generation

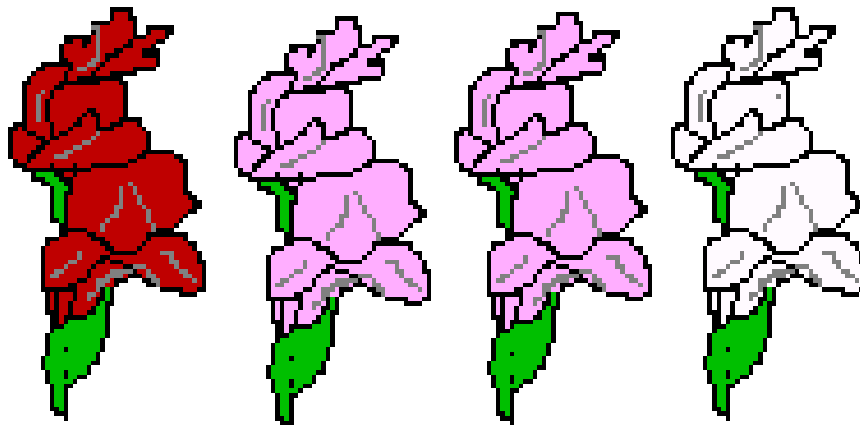




**Parental (P)
generation**



**F₁ generation
all pink**



F₂ generation

2. Co-dominance

a. Definition

b. Example



3. Multiple alleles

a. Definition

b. Example

AB

O

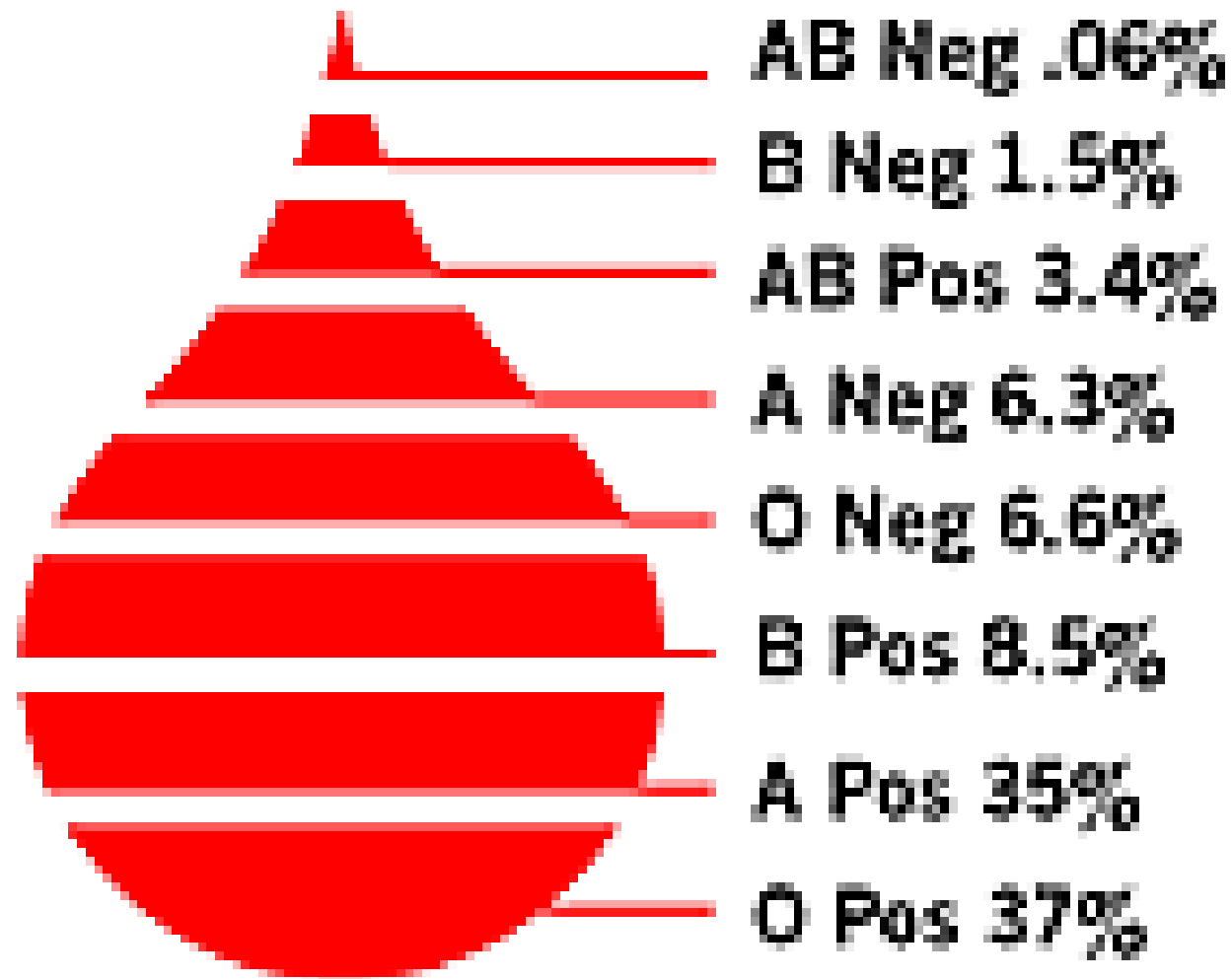


A

B

Phenotype (blood type)	Genotype	Antibodies in serum
A	AA or AO	Anti-B
B	BB or BO	Anti-A
AB	AB	None
O	OO	Anti-B and Anti-A

Frequency of Blood Types



4. Polygenic

a. Definition

b. Example

5. Environmental control

Tobin/Dusheck, Asking About Life, 2/e
Figure 16.6

