

Test review 11/14 - Genetics

Mendel: Single-factor crosses

T = tall

t = short

Ⓟ homozygous TT × tt

gametes - T t

	T	T
t	Tt	Tt
t	Tt	Tt

→ Ⓟ F₁

genotype ratio:
0:4:0

phenotype ratio:
4:0

F₁ cross: Tt x Tt

	T	t
T	TT	Tt
t	Tt	tt

→ (F₂)

genotype ratio:

1:2:1

phenotype ratio:

3:1

2 factor crosses:

W = white D = disk
 w = yellow d = sphere

Ⓐ WWDD x wwdd

gametes - WD x wd
 Ⓕ WwDd - dihybrid

F₁ cross: $\overline{WwDd} \times WwDd$

gametes:
(FOIL)

	WD	Wd	wD	wd
WD	WWDD	WwDd	WwDd	WwDd
Wd	WwDd	Wwdd	WwDd	Wwdd
wD	WwDd	WwDd	wwDD	wwDd
wd	WwDd	Wwdd	wwDd	wwdd

phenotype ratio: $9:3:3:1$

Incomplete Dom.

hybrid phenotype = blend

Codominance - hybrid phen = both show

♂ - RR

♀ - WW

offspring = RW

Multiple Alleles -

single gene but >2 alleles
more than 2 phenotypes

Down syndrome -

aneuploidy - #21 - trisomy (3)
↑ result of non-disjunction

Tumer's syndrome - XO^{α}
Klinefelter's syndr. - XXY^{α} } #23

