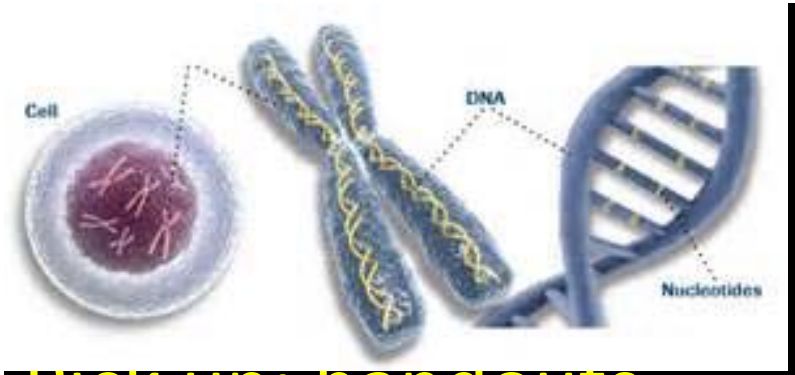


PHONES & EAR BUDS away Please!

Mon, Dec 18, 2017

Pick up: handouts

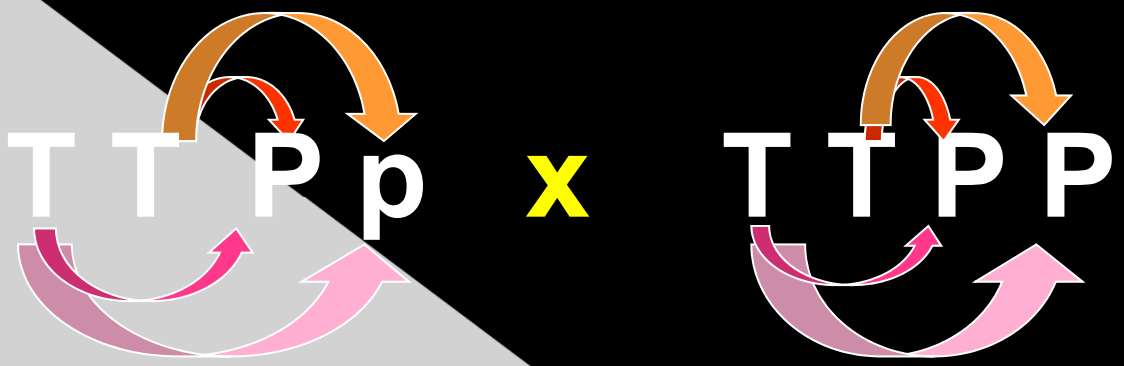
Today you will:

- Check key to Dihybrid Punnett Square
- Cornell Notes on Incomplete Dominance & Co Dom
- Amoeba Sisters nonmendelian inheritance
- Practice Incomplete dominance Punnett Squares
- Practice Co-dominance Punnett Squares

Homework/Planner:

Complete pg 8

DiHybrid Cross– Work it!



	TP	Tp	TP	Tp
TP	TTPP	TTPp	TTPP	TTPp
TP	TTPP	TTPp	TTPP	TTPp
TP	TTPP	TTPp	TTPP	TTPp
TP	TTPP	TTPp	TTPP	TTPp

Genotype	Phenotype
TTPP=8	Ho Tall, Ho Purp. 50%
TTPp=8	Ho Tall, Het Purp 50%

16:0

Self Check

1. The GENOtype is rep. by Letters ?
2. The PHenotype is rep. by words ?
3. Which is the genotype? Phenotype?

Pink petals = Phenotype ?

R r = Genotype ?

4. Tt means ? HeTeRozygous Tall = HyBriD
5. TT ? HOMOzygous Tall = PUREBRED
6. tt ? Short.., is it homozygous OR heterozygous short???

TRUE/False

1. A segment of DNA is an allele. — 1. F
2. A trait that is there, but MAY be masked by dominant trait is a recessive gene. — 2. T
3. Two of the same alleles is hEtErOzygous. — 3. F
4. The Law of Segregation states that genes MUST stay together. — 4. F
5. The genetic combination of an organism is called the Genotype. — 5. T
6. A Punnett square is used to show definite traits of offspring. — 6. F
7. Two different alleles for a trait is called HOMOzygous. — 7. F
8. The physical characteristic of the organism is called the phenotype. — 8. T
9. A recessive allele will show up if it is heterozygous. — 9. F

Notes ISN page 8

Incomplete Dominance

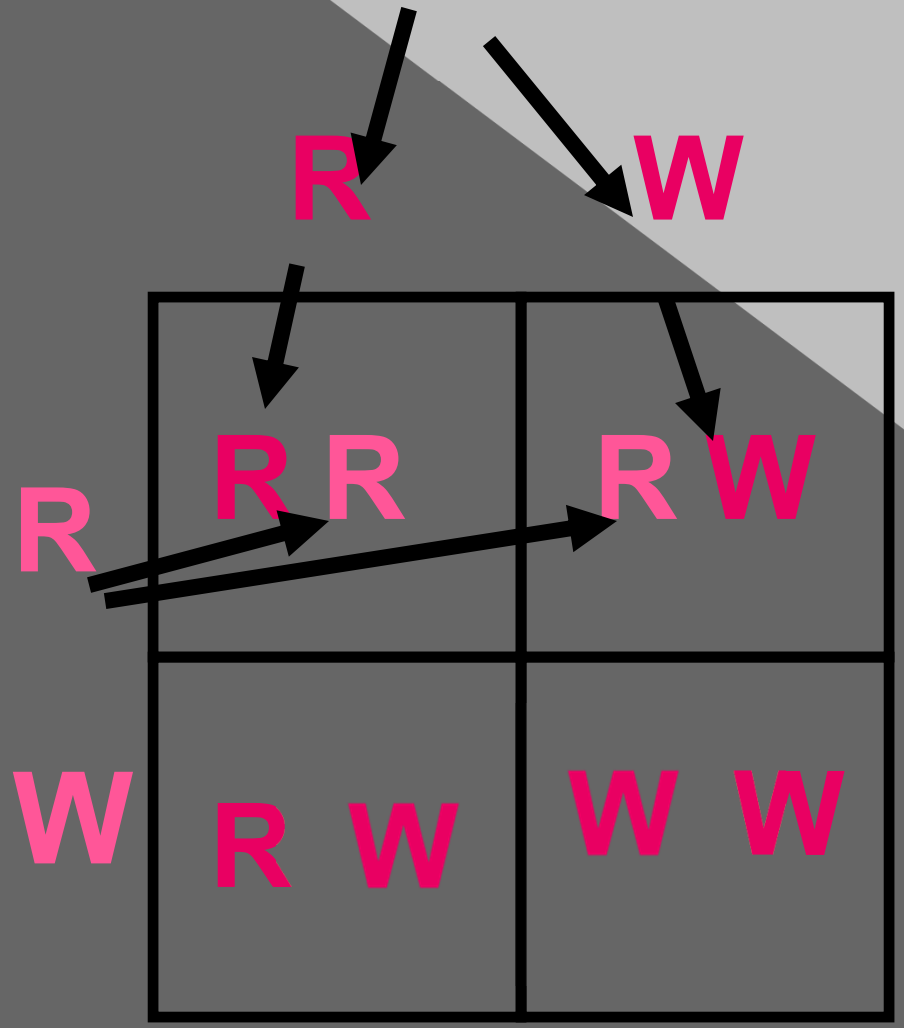
intermediate trait → they blend or MIX:

Ex. S (straight hair) + C (curly hair) = Wavy
Ex. T + S = Medium height plant
Ex. R + W = one flower that is Pink

Page 8 → Cross 2 pink flowers:

There is no dominance or recessiveness – the traits BLEND

RW x RW



Genotype	Phenotype
RR = 1	Red = 25%
RW 2	Pink = 50%
WW 1	white = 25%

Notes page 8

CoDominance

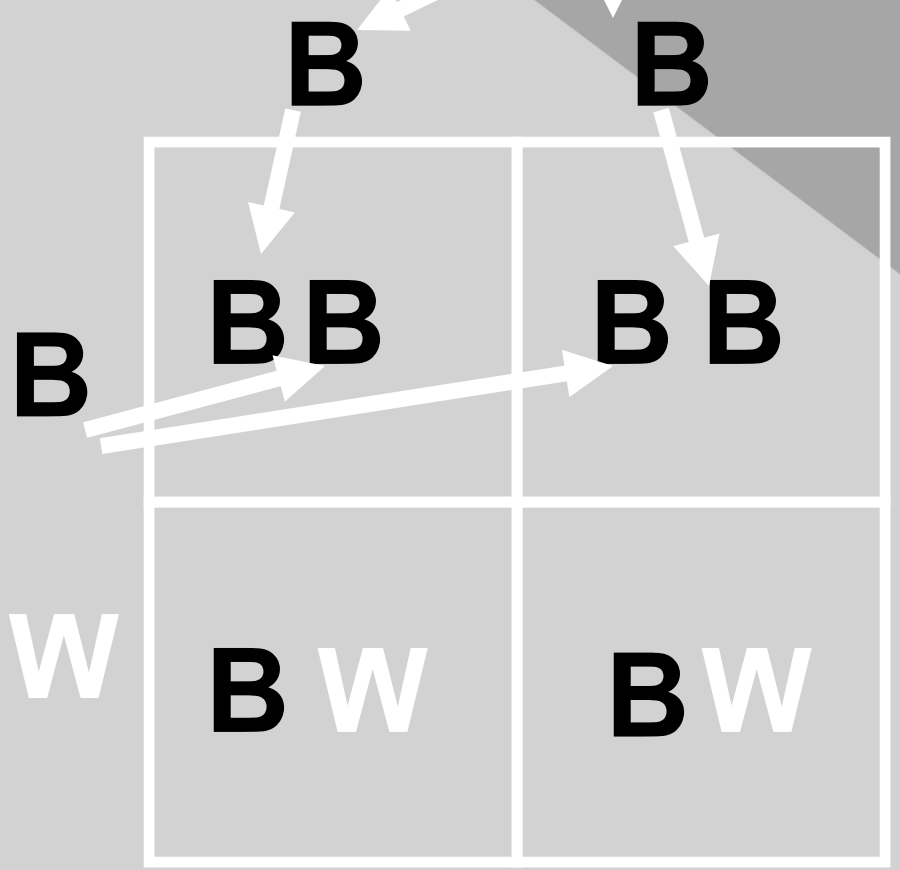
two traits show up equally:

- Ex. R + W = red AND white petals
- Ex. B + W = black AND white chicken

Page 8 → Cross a black chicken with a black & white one:

Both traits show up EQUALLY.

BB x BW



Genotype	Phenotype
BB = 2	Black= 50%
BW = 2	Black & White = 50%

Incomplete Dominance

- TB pg 219
- On notebook paper
- Answer questions 1-4 that pertain to the Family's Hair (straight or curly).

1. Father I^SI^S, Mother I^CI^C, Kathy & brother I^SI^C
2. 50% I^SI^S or 50% I^SI^C
3. 50% I^CI^C or 50% I^SI^C
4. 25% I^SI^S, 25% I^CI^C or 50% I^SI^C

Co-Dominance

TB pg 205 BLOOD TYPE KEY

◎ GENOTYPES:	• Detailed PHENOTYPES:
$I^A I^A =$	• Homozygous Type A
$I^A i =$	• Heterozygous Type A
$I^B I^B =$	Homozygous Type B
$I^B i =$	Heterozygous Type B
$I^A I^B =$	Type AB
$i\ i =$	Type O

Use the same format as we did for Monohybrid crosses.
Except is blood type is Co-dominant

On notebook paper

Read about Codominance on TB pg 205

- Complete practice problems:

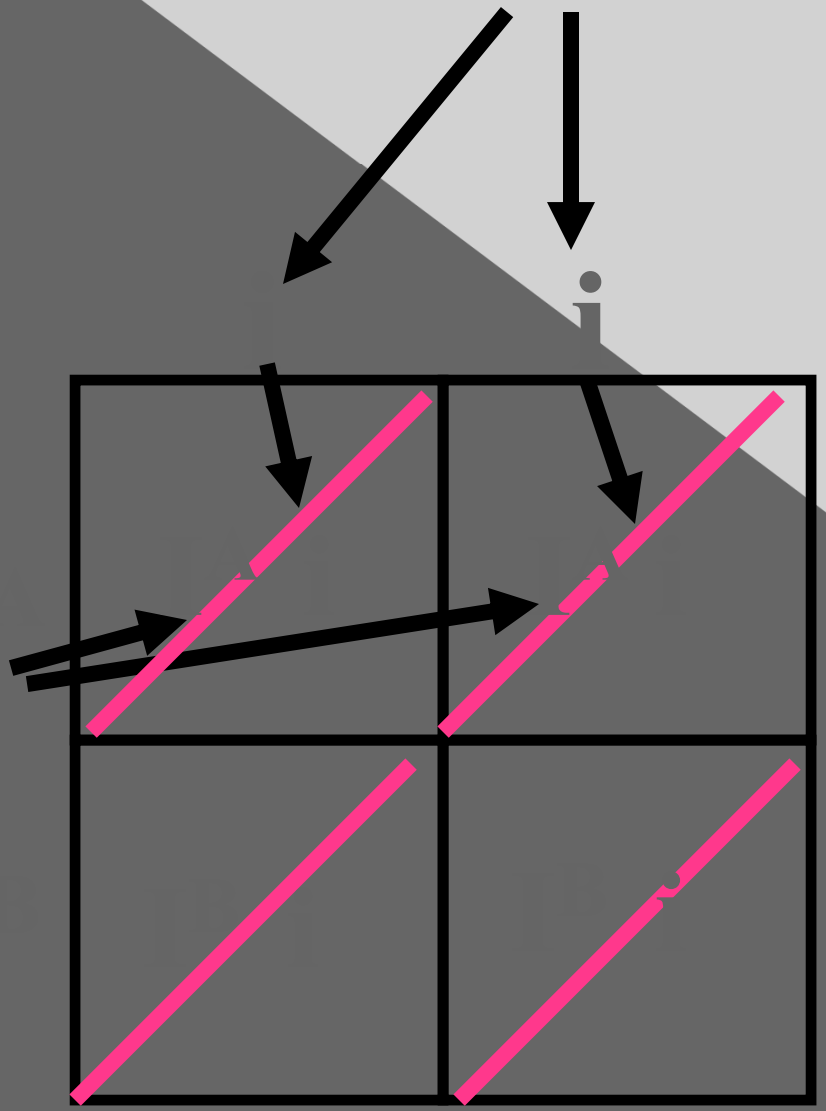
1. A male with AB blood type marries a woman with O blood type. What is the probability of the offspring?
2. Heterozygous Type A blood X Heterozygous Type B blood
3. AB x AB

Blood Type Questions…

1. A woman with Type O blood and a man who is Type AB have are expecting a child. What are the possible blood types of the kid?

$$ii \times I^A I^B$$

#1. ii x I^AI^B



Genotype	Phenotype
$I^Ai = 2$	Heterozygous Type A = 50%
2	Heterozygous Type B = 50%

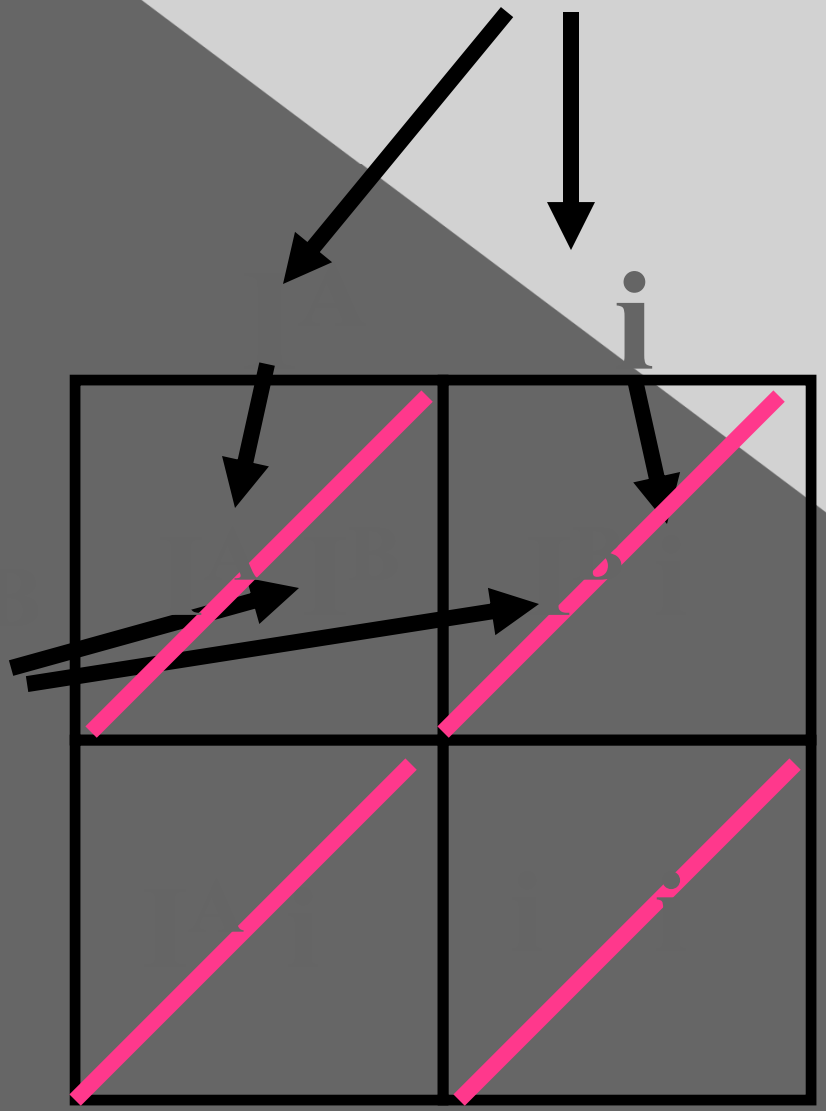
ratio of 2 : 2

Blood Type Question

2. What are the possible blood types of a child who's parents are both heterozygous for "B" & heterozygous for "A" blood type?

$$I^{A}i \times I^{B}i$$

#2. I^Ai x I^Bi



Genotype	Phenotype
$I^A I^B = 1$	Type AB = 25%
$I^B i = 1$	Heterozygous Type B = 25%
$= 1$	Heterozygous Type A = 25%
1	Type O = 25%

ratio of 1 : 1 : 1: 1