

PHONES & EAR BUDS away Please!

Tues, Dec 12, 2017

Pick up: none

Today you will:

- Check key to Review Term Practice pg 4
- Mendel's Pea Plants & Genetics
- Amoeba Sisters Punnett Squares
- Monohybrid Punnett Squares

Homework/Planner:

Punnett Squares pg 6-8, Study what we've covered so far, DIA Tues!

# p. Genetics Practice

## HOMOzygous vs HeTErOzygous

AA

DD

GG

hh

ll

kk

LL

Bb

Cc

Ee

Ff

Jj

# Give the PHenotype

**2A. PURPLE** flowers are DOMINANT to white flowers.

1) PP = HOMOzygous PURPLE

2) Pp = HeTEROzygous PURPLE

3) pp = HOMOzygous white

**2 A. BROWN** eyes are DOMINANT to blue eyes.

4) BB = HO BROWN

5) Bb = He BROWN

6) bb = HO blue

Cont.

## Give the PHeNOType

2C. **ROUND** seeds are DOMINANT to *wrinkled* seeds.

- |    |            |   |                    |
|----|------------|---|--------------------|
| 1) | RR         | = | HO <b>ROUND</b>    |
| 2) | R <i>r</i> | = | He <b>ROUND</b>    |
| 3) | <i>rr</i>  | = | HO <i>wrinkled</i> |

2D. **Bobtails** are recessive in cats

- |    |            |   |                   |
|----|------------|---|-------------------|
| 4) | TT         | = | HO tail           |
| 5) | T <i>t</i> | = | He tail           |
| 6) | <i>tt</i>  | = | HO <i>bobtail</i> |



*More*

## Give the GENOtype

**3A. STRAIGHT** hair is **DOMINANT** to curly.

- 1) **SS** = **STRAIGHT**
- 2) **Ss** = **He STRAIGHT**
- 3) **ss** = *curly*

**3A. POINTED** heads are **DOMINANT** to round.

- 4) **PP** = **POINTED**
- 5) **Pp** = **He POINTED**
- 6) **pp** = *round*

# Stop Think And Review

## 1. GENE

- TRAIT
- Ex. HEIGHT

## 2. DOMINANT

- WILL be expressed
- Ex. TALL

## 3. HOMOzygous

- SAME
- Ex. TT, *tt*

## 4. GENOtype

- Type of GENE
- Letters : TT

## 1. allele

- VaRiAtion of trait
- Ex. TALL, *short*

## 2. recessive

- *Not always expressed*
- *Ex. short*

## 3. hEtErOzygous

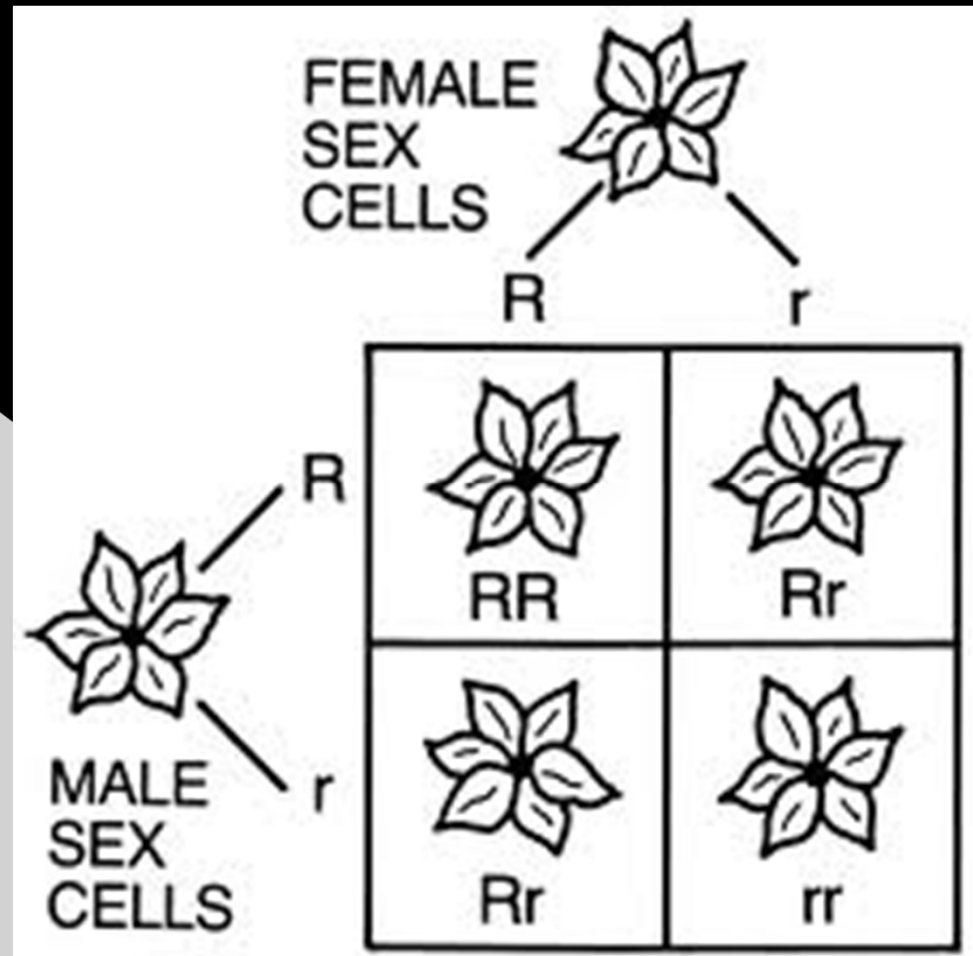
- DiFFErENT
- Ex. Tt

## 4. PHenotype

- PHysical trait
- TALL, short

# Punnett Squares... Axis, Grid Boxes

- A 4-square diagram for showing the probabilities of an offspring to inherit a certain pair of alleles from its parents
  - > Axis = rep. gamete genotypes of each parent
  - > Grid Boxes = show all of the possible genotypes of the offspring from those 2 parents



# Rules of Genetics

1. Letters...2 letters... 1 from MOM  
1 from Dad
2. DOMINANT = CAPITAL; use this for both traits
  - Ex. PP = PURPLE flowers
3. Recessive = Lower case... *cursive* or underline
  - Ex. *p p* = white flowers
4. Two of SAME letters = HOMozygous
  - TT, tt
5. Two DifFerENT letters = HeTErOzygous
  - T t



# MONOHybrid Cross = ONE trait

Color of seed:  $Yy$  X  $Yy$   
Mom X Dad

	Y	y
Y	YY	Yy
y	Yy	yy

GENO	PHeno
YY = 1	HO YELLOW = 25%
Yy = 2	He Yellow = 50%
yy = 1	Ho green = 25%
1 : 2 : 1	3 : 1

*Crossing 2 parents who are HeTErOzygous for the trait will always give you ratios above*

**TALL pea plants are dominant over short ones!!!**

- Cross 2 heterozygous tall plants

**$Tt \times Tt$**

	<b>T</b>	<b><math>t</math></b>
<b>T</b>	<b>TT</b>	<b><math>Tt</math></b>
<b><math>t</math></b>	<b><math>Tt</math></b>	<b><math>tt</math></b>

**Genotype**

**$TT = 1$**

**$Tt = 2$**

**$tt = 1$**

**Genotypic  
Ratio = 1:2:1**

**Phenotype**

**Homozygous  
TALL = 25%**

**Heterozygous  
TALL = 50%**

**(Homozygous)  
short = 25%**

**Phenotypic  
Ratio = 3:1**

# Your Job Today

page 5-8

## COMPLETE

- CN on pg 5
- Punnett Square Practice pg 6-7
- CN on pg 8