

Module 8 OYO's

8.1^A the plant will produce wrinkled peas

~~B~~ the plant will produce smooth peas

^C the plant will produce smooth peas

8.2 either YY or Yy the dominant = Y big

8.3 green = yy two littles

8.4 The "ss" offspring's genotype is simply, "ss", it is homogenous
Its phenotype is for smooth peas. The "Ss" offspring have
the "Ss" genotype, they are heterozygous, since the smooth
pea allele is dominant it has at least one big letter.

8.5

	P	P
P	PP	PP
p	Pp	Pp

8.6 No-tail allele is dominant

8.7 SY, Sy, sY, and sy

8.8 pleiotropy = different traits

8.9 AB = 25% , A = 25% , B = 25% , O = 25%

8.10 50% of children will be Rh-positive and 50% = Rh-negative

1. True breeding - If an organism has a certain characteristic that always passes on its offspring, we say that this organism breeds true with respect to that characteristic.

Allele - One of a pair of genes that occupies the same position on homologous chromosomes.

Genotype - Two-letter set that represents the alleles an organism possesses for a certain trait.

Phenotype - The observable expression of an organism's genes.

Homozygous genotype - A genotype in which both alleles are identical.

Heterozygous genotype - A genotype with two different alleles.

Dominant allele - An allele that will determine phenotype if just one is present in the genotype.

Recessive allele - An allele that will not determine the phenotype unless the genotype is homozygous in that allele.

Mendel's principles of genetics - 1) traits of an organism are determined by its gene. 2) Each organism has two alleles that make up the genotype for a given trait. 3) In sexual reproduction each parent contributes only one of its offspring.

4) In each genotype, there is a dominant allele. If it exists in all generations, the phenotype is determined by the allele.

j - pedigree - A diagram that follows a particular phenotype through several generations.

Monohybrid cross - A cross between two individuals, concentrating on only one trait.

Dihybrid cross - A cross between two individuals, concentrating on two traits.

Autosomes - Chromosomes that do not determine the sex of an individual.

Sex chromosomes - chromosomes that determine the sex of an individual.

Antigen - A protein that, when introduced in the blood, triggers the production of an antibody.

Autosomal inheritance - Inheritance of a genetic trait not on a sex chromosome.

Genetic disease carrier - A person who is heterozygous in a recessive genetic disorder.

Sex linked inheritance - Inheritance of a genetic trait located on a sex chromosome.

Mutation - A radical chemical change.

Change in chromosome structure - A situation in which a chromosome loses or gains genes during meiosis.

Change in chromosome number - A situation in which a normal cellular

events in meiosis tend to either none of a particular chromosome

in the gamete or more than one chromosome in the

gamete.

14
th

Handwritten notes at the bottom of the page, including some mathematical or genetic symbols like $1/2$ and $1/4$.

2. A. Heterozygous
B. Homozygous
C. heterozygous

3. Meiosis separates it, making it only having one
4. It half and have on the AA genotype

5. 50% can roll their tongues

6. Genotype = Bb

7. They all have a Nn genotype

8. 100% of offspring have the "SsYy" genotype
and smooth yellow phenotype.

9. Smooth yellow peas = SsYY, SsYy, SsYy, SsYy = 6.25% | smooth green peas = Ssyy, Ssyy
18.75% | wrinkled yellow peas = ssYY, ssYy = 18.75% | wrinkled yellow = ssyy = 6.25%

10. 50% = white eyed 50% feet white eyed

11. Genotype = X^RY

12. Change in Chromosome number = genetic disorder

13. Genetic disorders = recessive

14. Sex-linked disorders affect men more.

15. While the genetics are the same, the environmental and
spatial factors were probably different

16. A = 50% B = 50%

17. Type B = BB or BO

18. Polygenic inheritance

Module 8 Notes

Pedigrees

Family tree

Genetic - passed on

Circles = Females

Square = male

Phenotype = how you look like

Heterozygotes

Genotype = ee or Ee

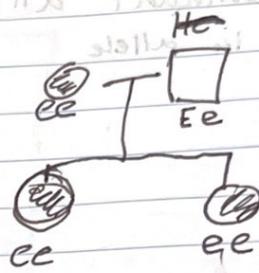
big letter = dominant - A
recessive - a

A restatement of Mendel's Principles

1. The traits of an organism are determined by its genes
2. Each organism has two alleles that make up the genotype for a given trait.
3. In sexual reproduction, each parent contributes only one of its alleles to its offspring
4. In each genotype, there is a dominant allele. If it exists in an organism, the phenotype is determined by that allele

Notes

EE ee
 Ee



Taster

when
1/23

Notes

phenotype

genotype

AA
aa

homozygous

Aa

heterozygous

X^H	$X^H X^H$	$X^H Y$
X^h	$X^H X^h$	$X^h Y$

dominance - determines phenotype.