

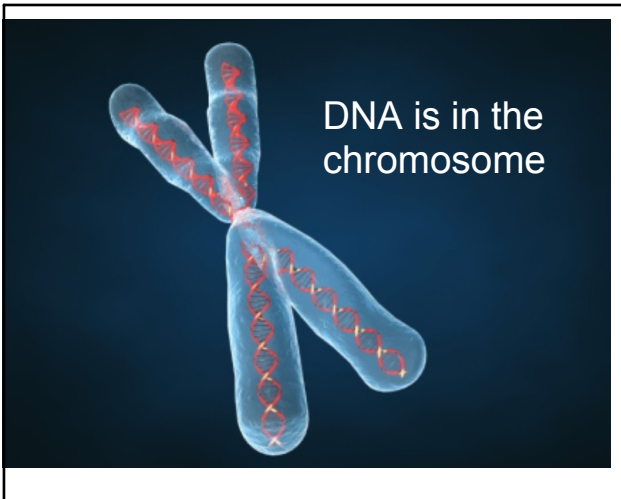
**Lesson 19:**  
The Next Generation: Secrets Revealed  
 Review Packet Answers

Dec 2-7:15 AM

How many chromosomes does each human parent contribute?

You get 23 single chromosomes from Dad and 23 single chromosomes from Mom.

Dec 2-7:16 AM



Dec 2-7:35 AM

How many chromosome pairs does a human body cell have?

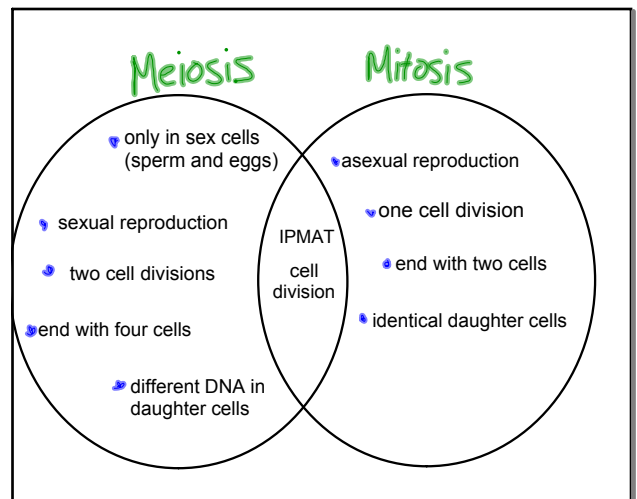
23 pairs

Dec 2-7:22 AM

What is meiosis? How is it different than mitosis?

The process of cell division which results in a cell where the 23 pairs of chromosomes split into two, each with 23 chromosomes. These cells are the female ova (eggs) and the male sperm.

Dec 2-7:37 AM



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What is the difference between genotype and phenotype?

Genotype is the "Genes"  $Bb$

Phenotype is the displayed trait



Dec 2-7:51 AM

What does it mean to be homozygous or heterozygous?

**Homozygous** means you have two of the **same** genes.

$MM$        $mm$

**Heterozygous** means you have two of **different** genes.

$Mm$

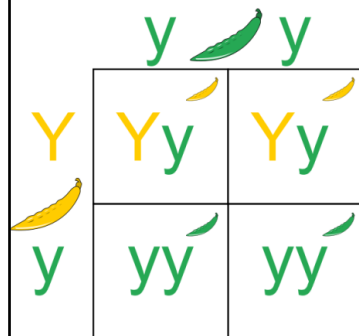
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What does a Punnett Square tell you?

- It shows the probability of an offspring inheriting a certain genetic trait.

Dec 2-8:02 AM

Example: Pea Plants

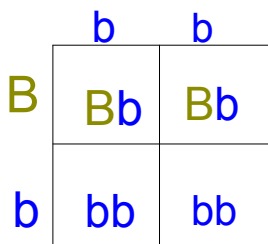


What percent will be Yellow?

What percent will be green?

Dec 2-7:24 AM

In humans, blue eyes are recessive and brown eyes are dominant. Create a Punnett Square to cross a blue eyed female with a heterozygous brown eyed male.



Dec 2-8:11 AM

In the previous example, what percent of the offspring will be:

Homozygous recessive: 50%

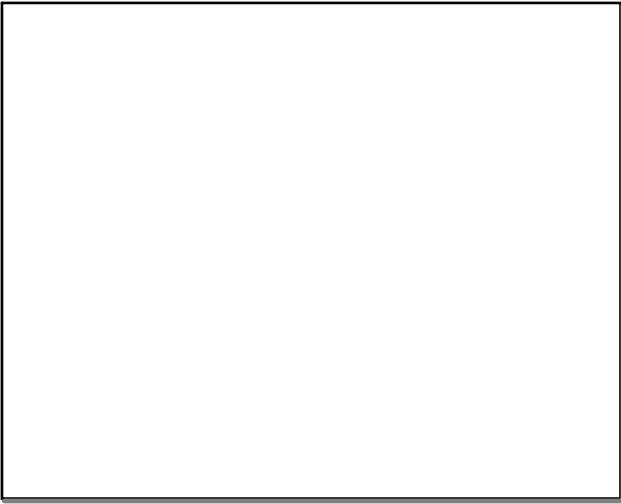
Heterozygous dominant: 50%

Homozygous dominant: 0

Blue eyed: 50%

Brown eyed: 50%

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Dec 2-8:59 AM