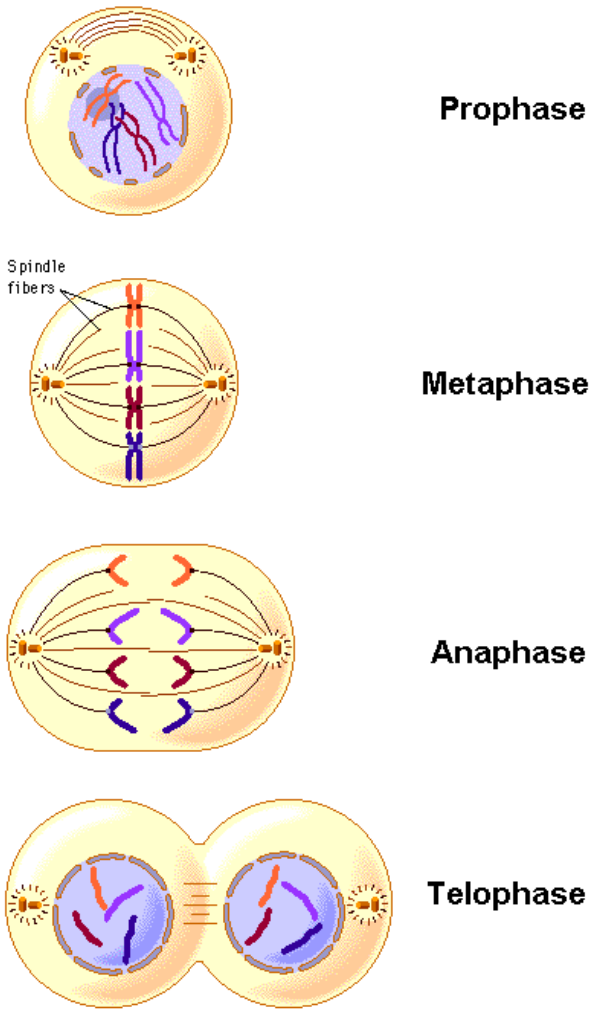
TEST REVIEW

1. What is produced in replication? DNA
2. What is produced in transcription? RNA
3. What is produced in translation? Amino acid chain
4. How are codons and anticodons related? They are complementary
5. What are the three types of RNA and what do they do?

mRNA – copies DNA info
tRNA – transfers a.a.'s
rRNA – makes ribosomes

- What is the purpose of mitosis?
  Cell reproduction and growth – cells are identical
- Only body cells go through mitosis; why would sex cells need a different process?

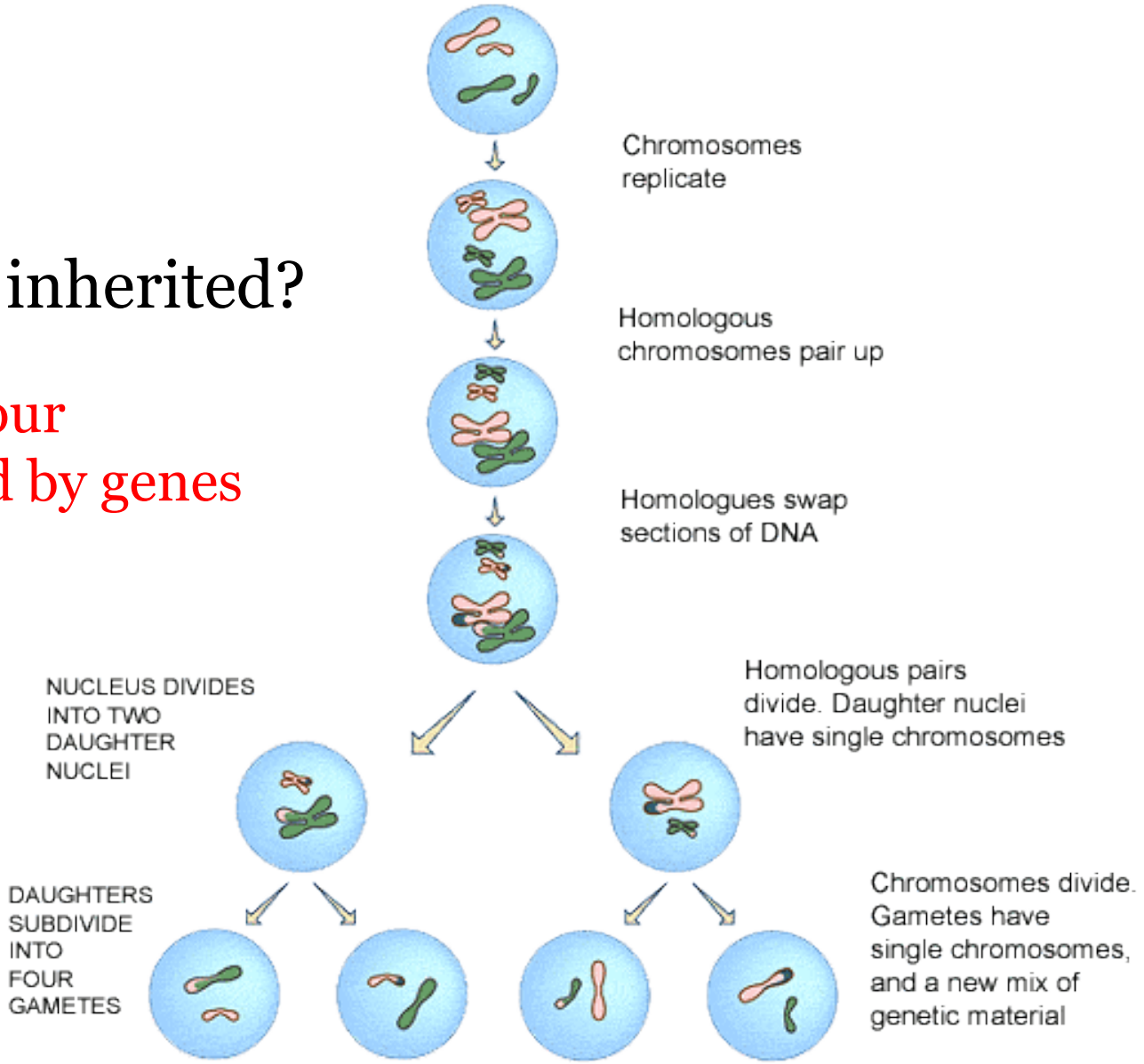
Sex cells need to be different, not identical



Meiosis

- How are traits inherited?

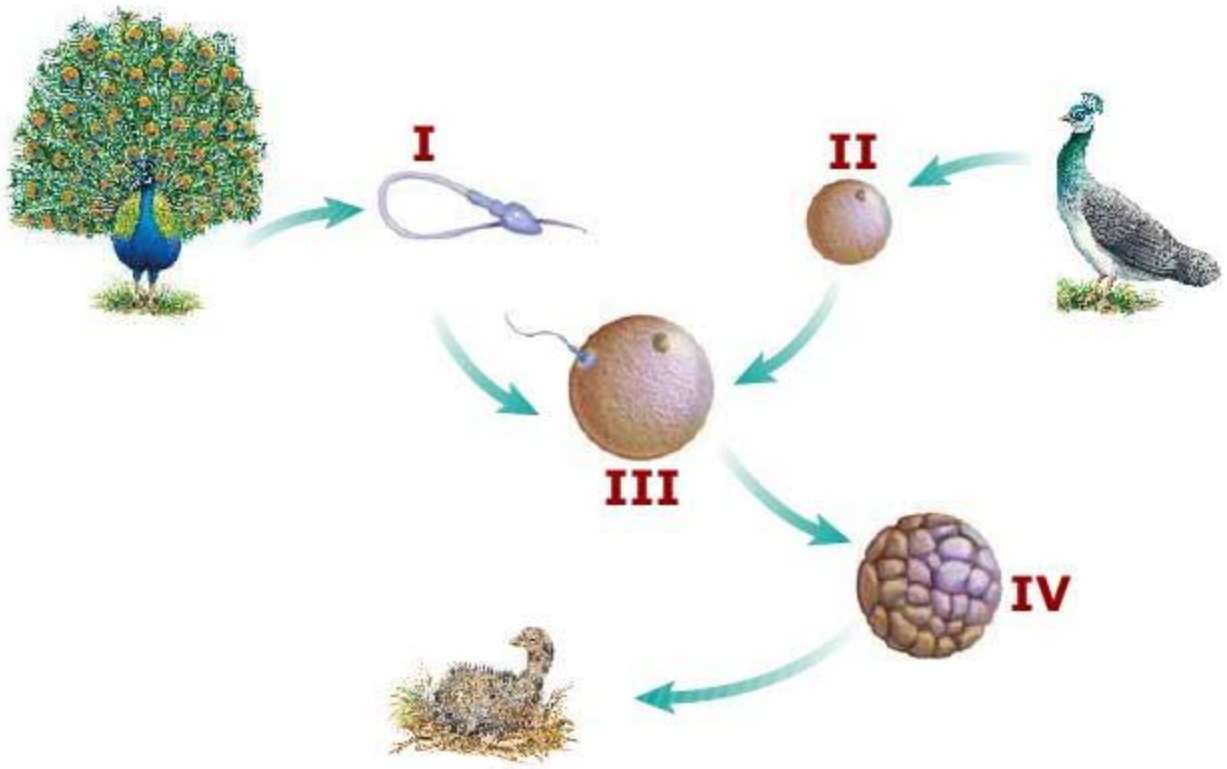
Passed down from our parents, determined by genes



Remember Mitosis!

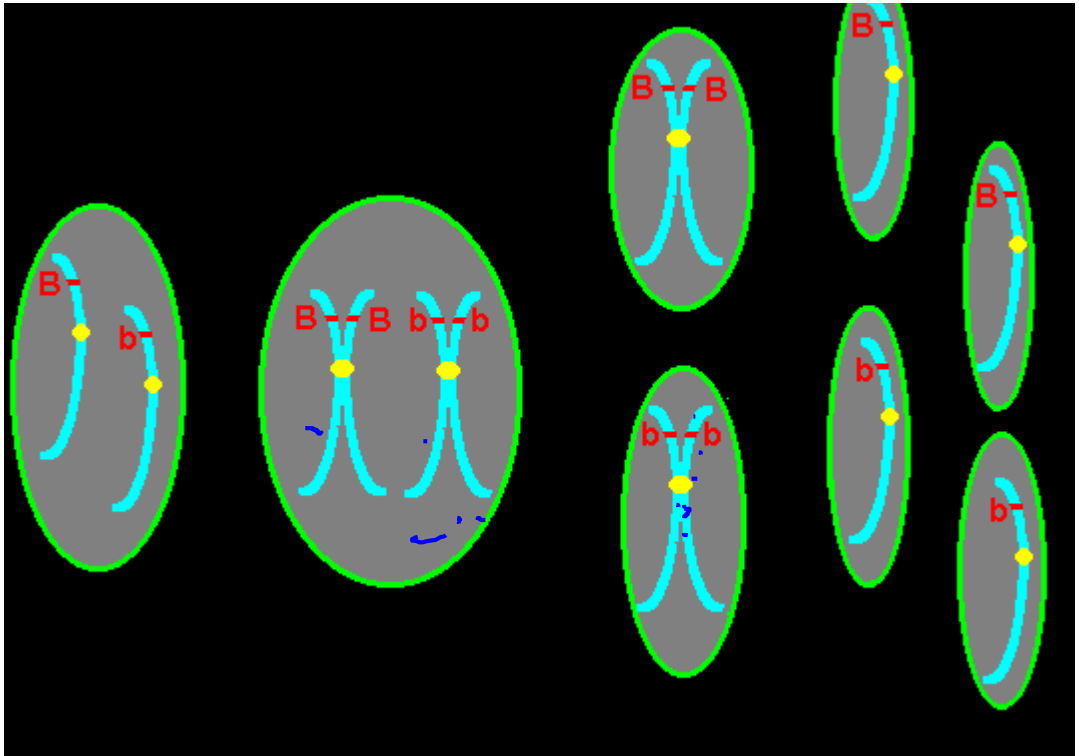
- Purpose: to replicate somatic cells (body cells)
- PMAT

- Meiosis is the process we use to make our sex cells



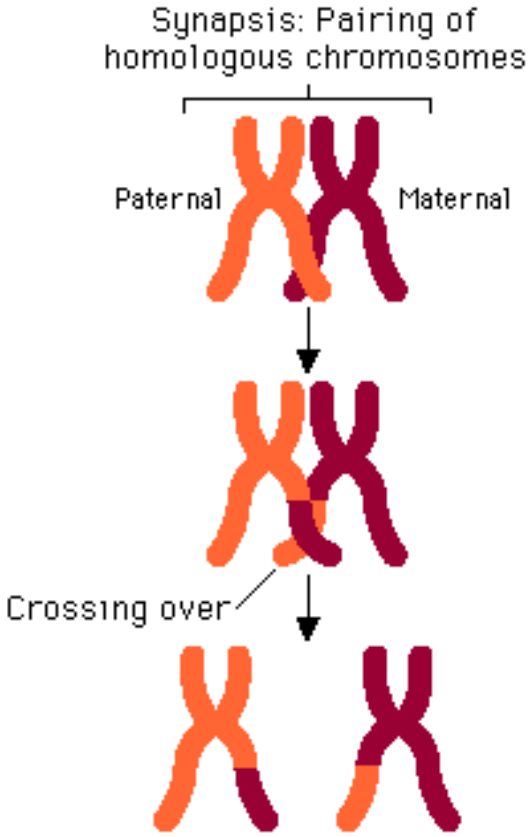
Meiosis

- Two parts:
  - **Meiosis I:** make two haploid daughter cells with duplicated chromosomes
  - **Meiosis II:** haploid daughter cells from Meiosis I divide to make 4 haploid daughter cells called gametes



Meiosis I

- Interphase
- *Prophase I:*
  - *Homologous chromosome pairs (paternal and maternal chromosomes) pair up to form a* ***tetrad***
  - ***Crossing over*** *occurs*
- Metaphase I
- Anaphase I
- Telophase I and Cytokinesis

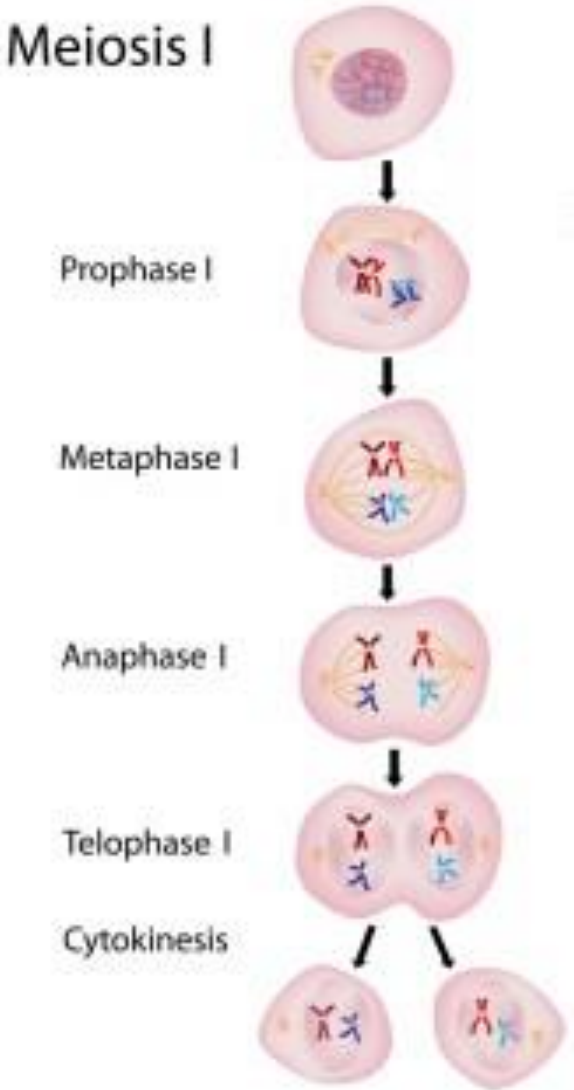


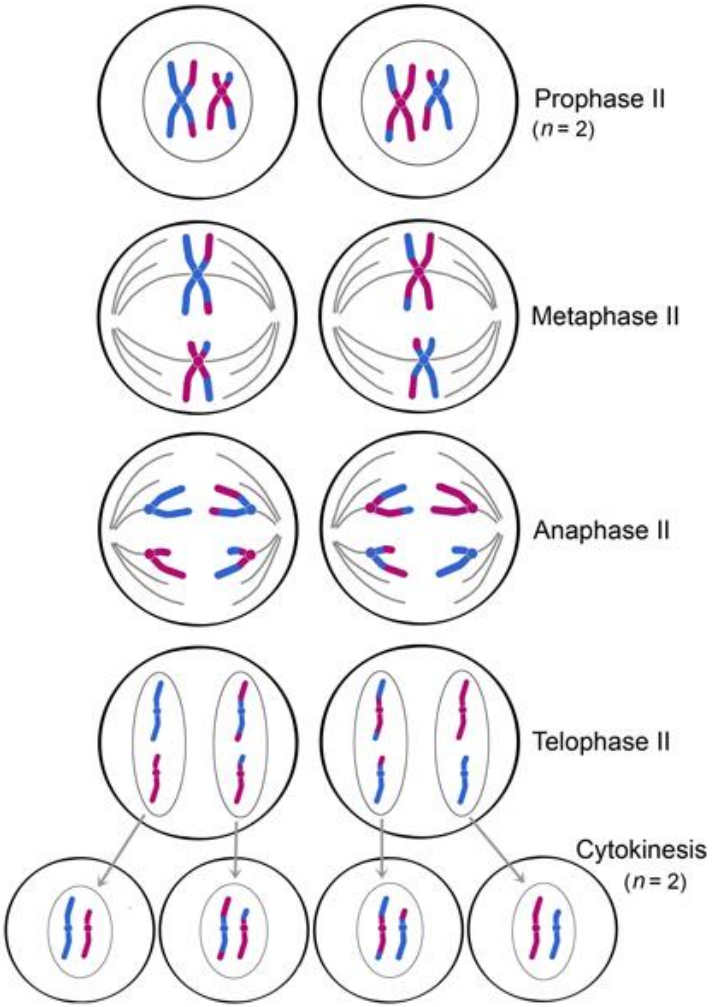
Meiosis I

- Produces two daughter cells with *one chromosome from each parental pair*
- Each daughter cell proceeds to Meiosis II

Meiosis II

- PMAT II
- Results in haploid daughter cells with a single chromosome from mom or dad
  - After this step chromosome number is reduced to ½


Meiosis I
Prophase I
Metaphase I
Anaphase I
Telophase I
Cytokinesis


Prophase II
(n = 2)
Metaphase II
Anaphase II
Telophase II
Cytokinesis
(n = 2)