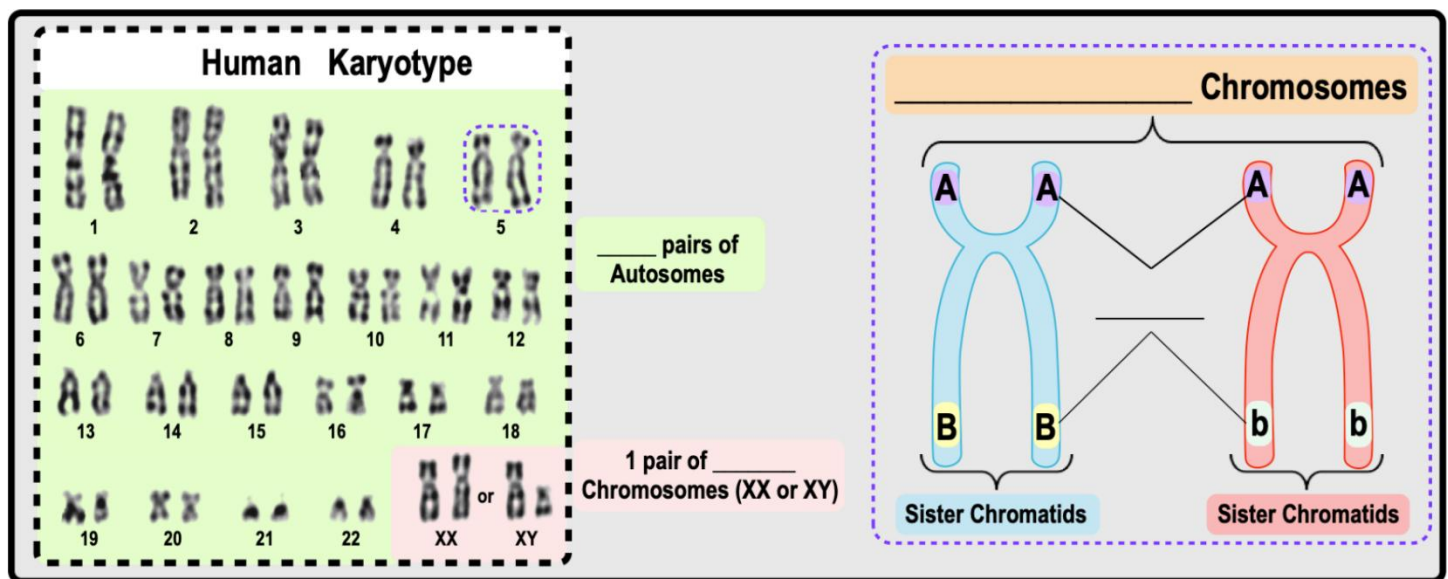


CONCEPT: HOMOLOGOUS CHROMOSOMES

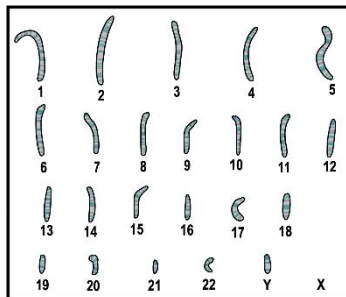
- _____: an ordered display of all chromosomes in a cell.
- Human somatic cells contain _____ pairs of chromosomes (for a total of 46).
 - _____ pairs of **autosomes**: non-sex chromosomes that are found in both males & females.
 - _____ pair (X & Y chromosomes) are _____ chromosomes that determines the sex of the organism.
 - Female (♀): X _____ □ Male (♂): X _____
- **Homologous Chromosomes**: pairs *similar* in size/shape & carry the same genes but can have different _____.
 - Within each homologous chromosome pair, one is *paternally* inherited and the other is *maternally* inherited.

EXAMPLE: Karyotype of the 23 human chromosome pairs.



PRACTICE: The human karyotype shown below:

- Is of a haploid cell.
- Is from a gamete.
- Shows 23 chromosomes.
- All of the above.



PRACTICE: How might the two members of a pair of homologous chromosomes differ from each other?

- In the sequence of the DNA making up each of the chromosomes.
- In the relative position of the genes present on each of the chromosomes.
- They cannot differ if they are homologous.
- In the kinds of genes present on each of the chromosomes.