CONCEPT: CHROMOSOMAL REARRANGEMENTS: INVERSIONS

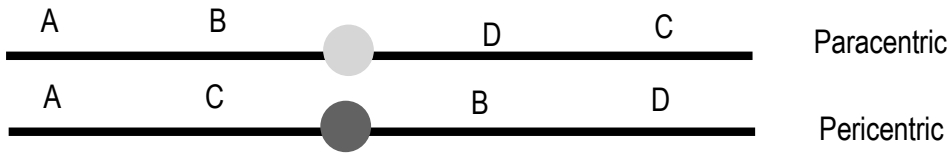
● An **inversion** describes a chromosomal rearrangement when the orientation of a segment is reversed

□ There two main _____ of inversions

- **Paracentric** describes inversions when the centromere is outside

- **Pericentric** describes inversion spanning the centromere

EXAMPLE:



□ **Inversion heterozygote** describes an organism with one normal chromosome, and one inverted chromosome

- This does not mean the alleles are heterozygous, just the _____

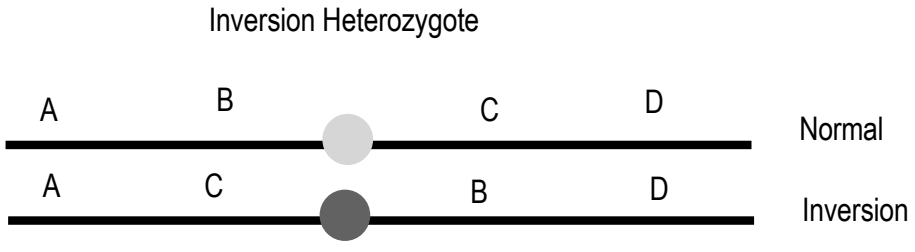
□ An **Inversion loop** forms between the inversion heterozygotes to assist in segregation

- Involves twisting one end of the inverted chromosome to pair with the uninverted chromosome

□ A **balancer chromosome** is often used to suppress cross over in genetic studies

- Balancer chromosomes contain multiple inversions and markers which disrupts synapsis and CO

EXAMPLE:



PRACTICE:

1. A person has a WT chromosome with the following segments. A B C • D E F G H. Which of the following shows how the chromosome would look after an paracentric inversion?
    a. A B C • D E F G H
    b. A B E D • C F G H
    c. A B C • D G H
    d. A B C • D G F E H

2. A person has a WT chromosome with the following segments. A B C • D E F G H. Which of the following shows how the chromosome would look after a pericentric inversion?
    a. A B C • D E F G H
    b. A B E D • C F G H
    c. A B C • D G H
    d. A B C • D G E F H