CONCEPT: CHROMOSOMAL REARRANGEMENTS: OVERVIEW

● **Chromosomal rearrangements** describe changes in chromosomal structure

□ There can be many _____ including: deletions, duplications, translocations, inversions

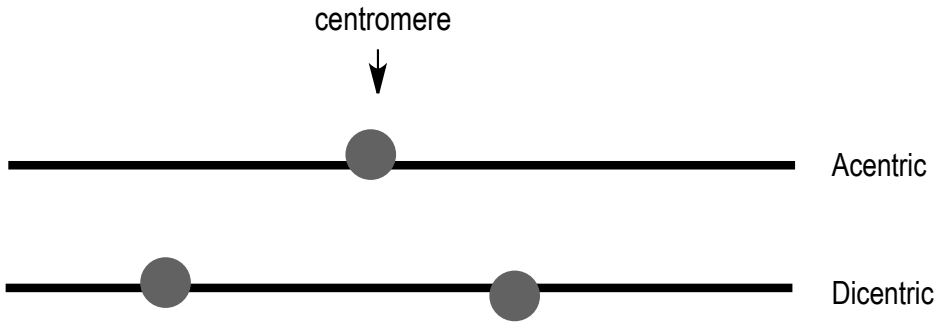
□ Rearrangements are named based on their occurrence in reference to the centromere

- **Acentric chromosomes** are chromosomes that lack a centromere due to a chromosomal rearrangement

- **Dicentric chromosomes** are chromosomes with 2 centromeres due to a chromosomal rearrangement

- **Anaphase bridge** occurs when a dicentric is simultaneously pulled to opposite poles in anaphase

EXAMPLE:



□ There are two rearrangement _____

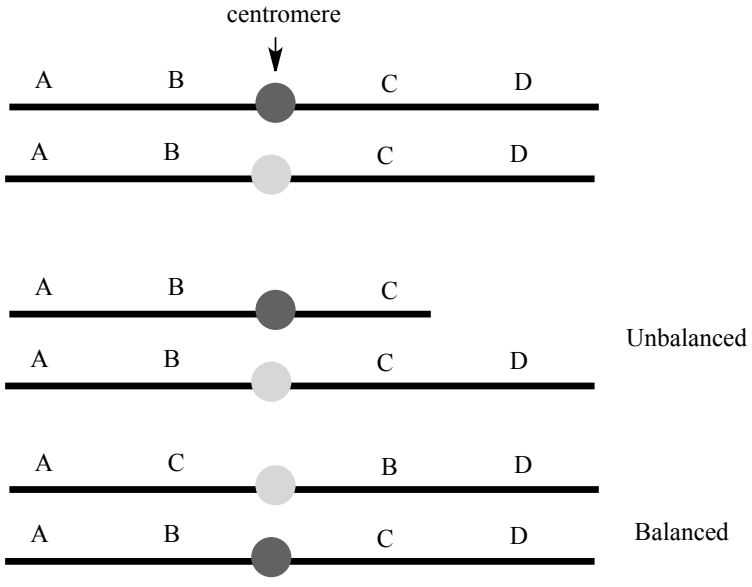
- **Unbalaned rearrangements** occur when there in a change of gene dosage of chromosomal segment

- Occur through deletion or duplication

- **Balanced rearrangements** occur when there is a change of gene order

- Occur through inversions or translocations

EXAMPLE:



PRACTICE

1. What is the name for a chromosomal rearrangement that causes a change in gene dosage?
    a. Altered
    b. Uneven
    c. Unfair
    d. Unbalanced

2. Inversions cause what type of chromosomal rearrangement?
    a. Unbalanced
    b. Uneven
    c. Balanced
    d. Even

3. A chromosome with two centromeres is called what?
    a. Bichromosome
    b. Bivalent
    c. Dicentric
    d. Acentric