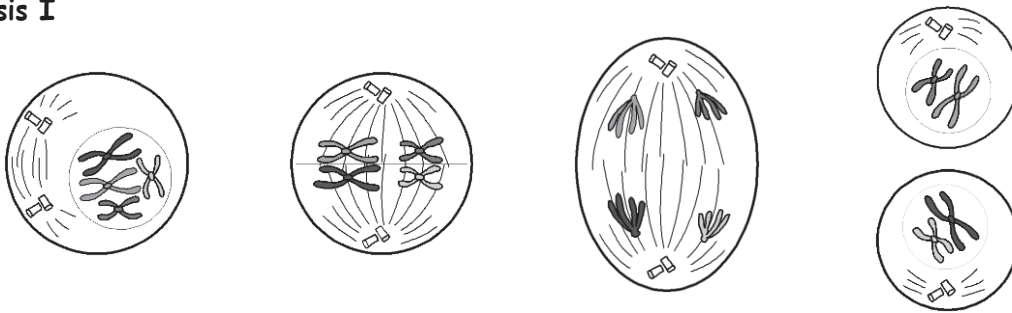


Homologous chromosomes:

- pair of chromosomes,
- inherit one from each parent, carry the same genes although the genes may code for different alleles,
- separate in meiosis I

Sister chromatids:

- duplicates of each other,
- each half of a duplicated chromosome,
- attached together at the centromere,
- separate in meiosis II

Meiosis I**1. Prophase I:**

chromosomes condense, homologous chromosomes begin to pair up, nuclear envelope breaks down, spindle fibers form

2. Metaphase I:

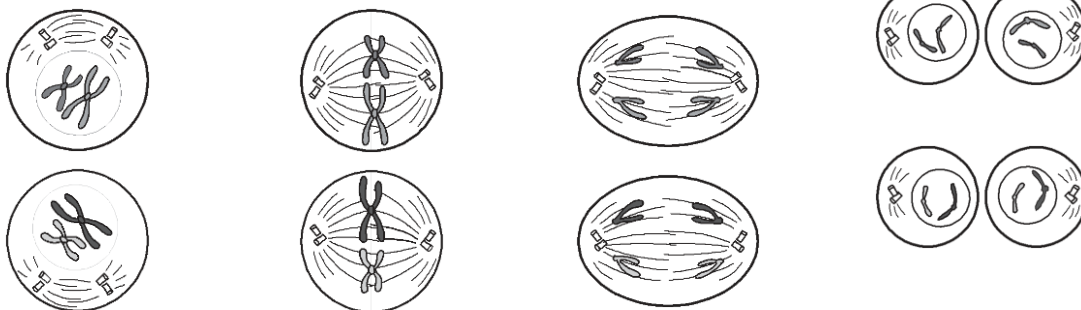
spindle fibers align homologous chromosomes along the cell equator

3. Anaphase I:

homologous chromosomes separate to opposite sides of cell, sister chromatids remain attached

4. Telophase I:

spindle fibers fall apart, nuclear membrane may form again, cell undergoes cytokinesis

Meiosis II**5. Prophase II:**

nuclear envelope breaks down if necessary, spindle fibers form

6. Metaphase II:

spindle fibers align chromosomes along the cell equator

7. Anaphase II:

chromatids separate to opposite sides of cell

8. Telophase II:

nuclear membranes form around chromosomes, chromosomes begin to uncoil, spindle fibers fall apart, cell undergoes cytokinesis