MEIOSIS

- Meiosis is a kind of cell division in which chromosome number is reduced by half.
- Meiosis produces haploid (n) cells with new combination.

Stages of meiosis

- Meiosis steps: meiosis I, cytokinesis (interkinesis), meiosis II, cytokinesis.
- Meiosis I, each of double set of chromosome is replicated to produce complete copy of every genes.

Prophase I

- Chromosomes comes together in pairs, each pair called tetrad (complex of 4 chromatids)
- Chromatids of chromosomes **cross over** and exchange the genetic material.
- Nucleus membrane disappears
- Centrioles moves to poles

Metaphase I

- Tetrads line up on the equatorial plane.
- Chromosomes attaches to the spindle fiber extending from poles (centrioles)

Anaphase I

- Homologous chromosomes separates to opposite poles

Telophase I

- Movement of homologous chromosomes continues
- Haploid set of chromosome forms
- Cytokinesis occurs simultaneously.

Meiosis II

- After meiosis I cells immediately begins second division, meiosis II

Prophase II

- Same as prophase I

Metaphase II

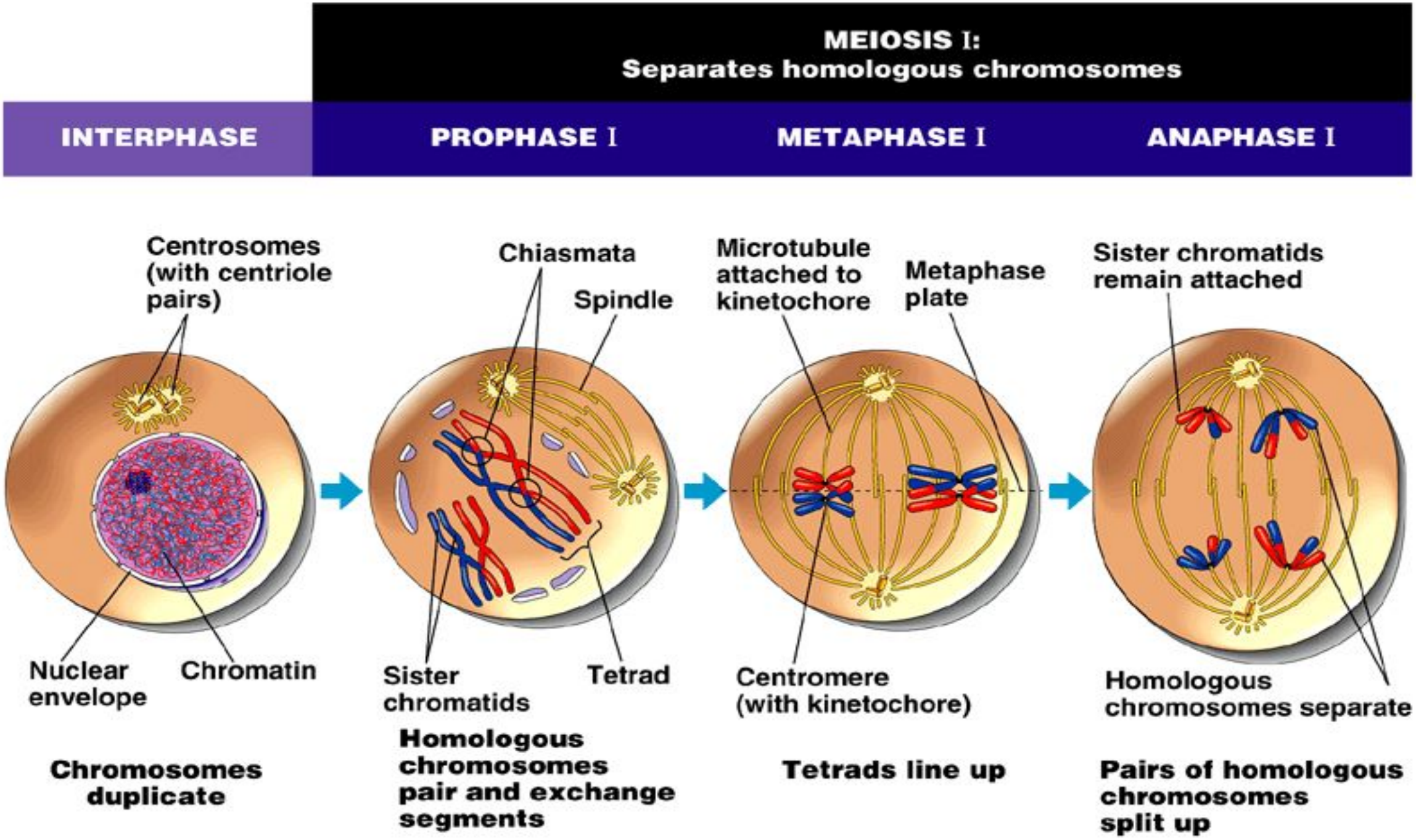
- Chromosomes stay at the equator

Anaphase II

- Chromatids moves to poles (Chromosomes split into 2 part)

Telophase II

- Nucleus appears
- Chromosomes starts uncoil (becomes invisible)
- Cytokinesis begins (Dividing of cytoplasm)


MEIOSIS I:
Separates homologous chromosomes
INTERPHASE
PROPHASE I
METAPHASE I
ANAPHASE I
Centrosomes (with centriole pairs)
Nuclear envelope
Chromatin
Chromosomes duplicate
Chiasmata
Spindle
Sister chromatids
Tetrad
Homologous chromosomes pair and exchange segments
Microtubule attached to kinetochore
Metaphase plate
Centromere (with kinetochore)
Tetrads line up
Sister chromatids remain attached
Homologous chromosomes separate
Pairs of homologous chromosomes split up