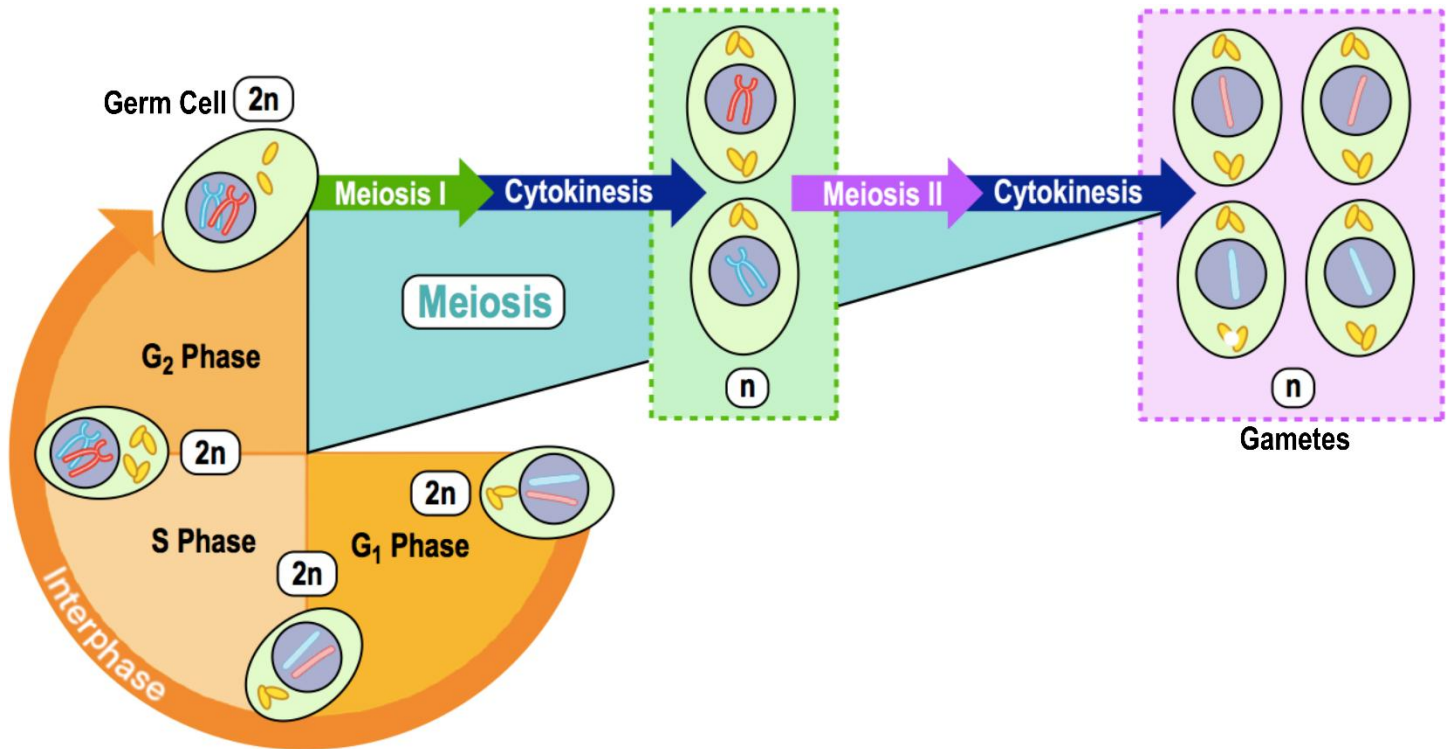


CONCEPT: INTRODUCTION TO MEIOSIS

- Before meiosis, a diploid cell must replicate its DNA & make proteins for cell division in _____.
- Meiosis starts with a *diploid* _____ cell & ends with _____ genetically *diverse* _____ gametes.
 - **Germ Cells:** _____ cells that are the *precursor* for making *gametes* (sperm or egg).



EXAMPLE: The process of meiosis produces:

- 2 diverse haploid gamete cells.
- 2 identical diploid gamete cells.
- 4 identical diploid germ cells.
- 4 diverse haploid gamete cells.
- 4 identical diploid gamete cells.

PRACTICE: Which of the following steps must occur before Meiosis I in germ cells?

- The DNA of the haploid cell is replicated.
- The RNA of the diploid cell is replicated.
- The DNA of the diploid cells is replicated.
- The two cells need to be physically separated by cytokinesis.

CONCEPT: INTRODUCTION TO MEIOSIS

- Meiosis is broken down into _____ rounds of cell division:

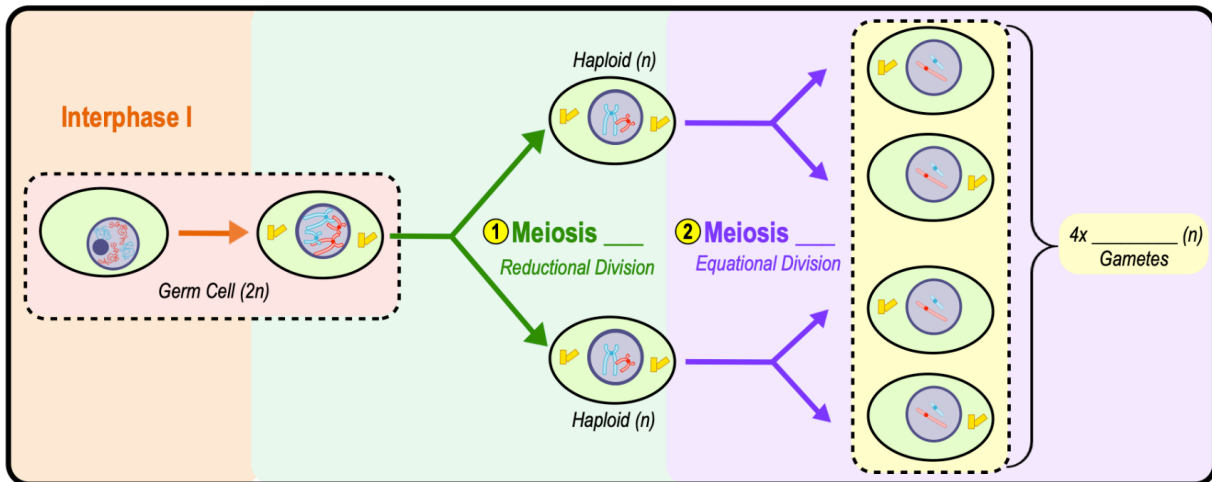
① **Meiosis I (Reductional Division)**: reduces ploidy by separating homologous _____.

□ Diploid ($2n$) germ cell divides into _____ haploid (n) daughter cells.

② **Meiosis II (Equational Division)**: maintains equal ploidy by separating sister _____.

□ Haploid (n) cells from meiosis I divide producing _____ genetically diverse haploid (n) gametes.

EXAMPLE: Meiosis I & Meiosis II.



PRACTICE: In Meiosis I, cytokinesis usually occurs after telophase I and produces:

- a) Four diploid cells.
- b) Two haploid cells.
- c) Four haploid cells.
- d) Two diploid cells.

PRACTICE: In Meiosis II, _____ cells are divided into 4 _____ daughter cells.

- a) Diploid; Haploid.
- b) Haploid; Diploid.
- c) Haploid; Haploid.
- d) Diploid; Diploid.