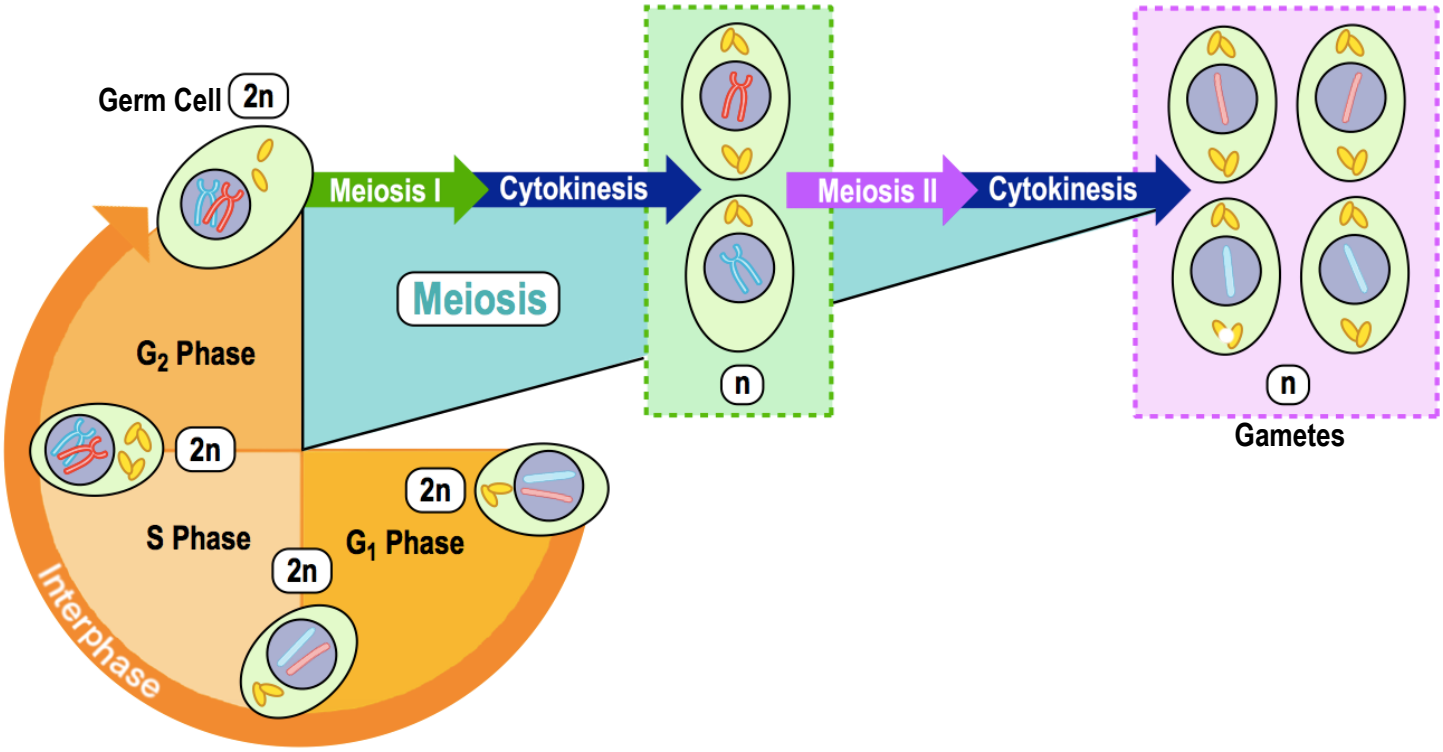
CONCEPT: INTRODUCTION TO MEIOSIS

●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:

a) 2 diverse haploid gamete cells.
b) 2 identical diploid gamete cells.
c) 4 identical diploid germ cells.
d) 4 diverse haploid gamete cells.
e) 4 identical diploid gamete cells.

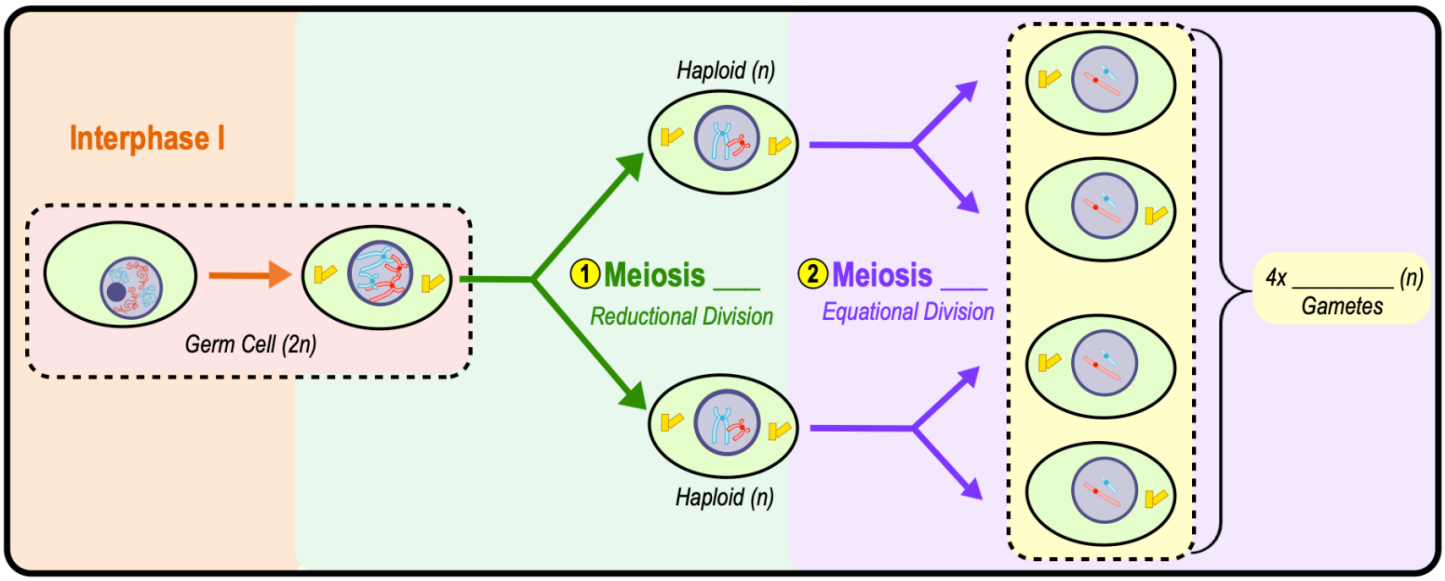
PRACTICE: Which of the following steps must occur before Meiosis I in germ cells?

a) The DNA of the haploid cell is replicated.
b) The RNA of the diploid cell is replicated.
c) The DNA of the diploid cells is replicated.
d) 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* (2*n*) 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.