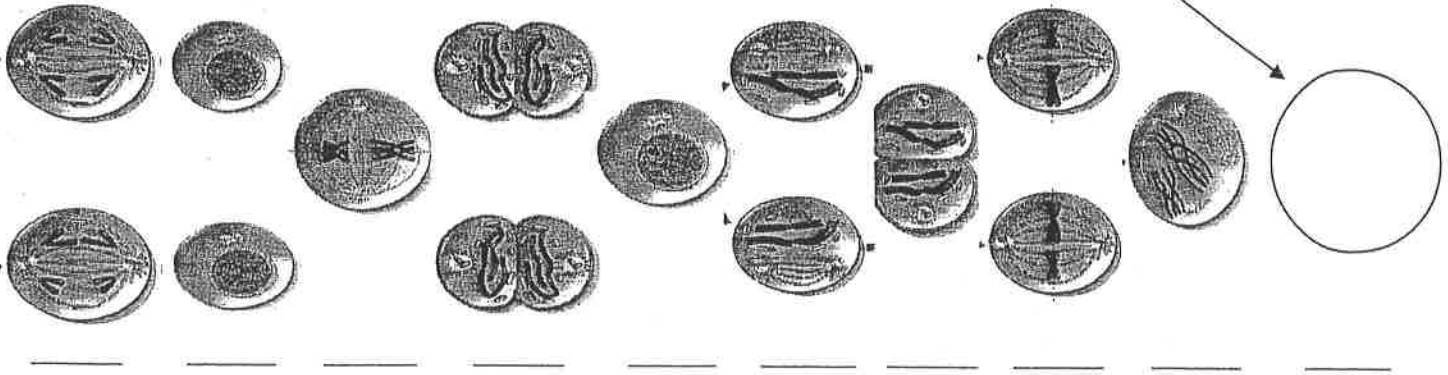


# Meiosis

1) Number the phases of Meiosis (below) in the order that they occur. Then draw a **diagram** of the missing phase of Meiosis

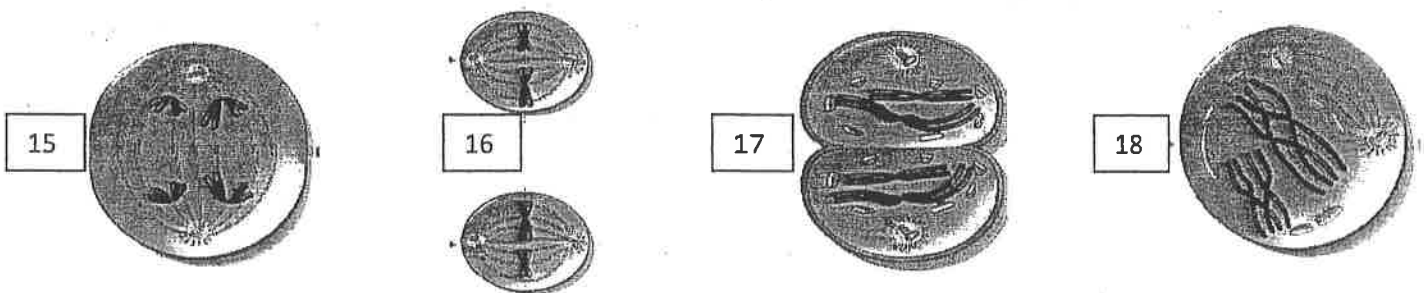
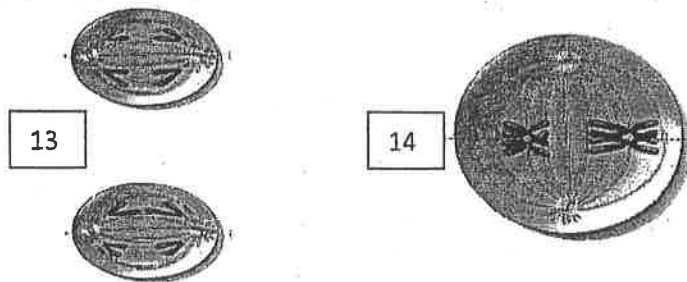


Matching: match each Meiosis description or diagram below to its corresponding phase

### Meiosis Phases

- |                  |                |                 |                |                 |
|------------------|----------------|-----------------|----------------|-----------------|
| A = Interphase 1 | C = Prophase 1 | E = Metaphase 1 | G = Anaphase 1 | I = Telophase 1 |
| B = Interphase 2 | D = Prophase 2 | F = Metaphase 2 | H = Anaphase 2 | J = Telophase 2 |

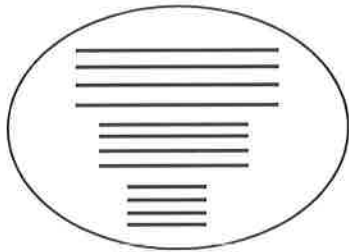
- \_\_\_\_\_ 2) "Double" chromosomes line up **single file** along the equator of this **haploid** cell
- \_\_\_\_\_ 3) Homologous chromosome pairs separate and "double" chromosomes move to opposite poles as spindle fibers retract
- \_\_\_\_\_ 4) DNA exists as chromatin and the nucleolus is visible but **NO** DNA Replication occurs
- \_\_\_\_\_ 5) Homologous chromosomes align side-by-side and crossing-over may "blend" the DNA into new gene combinations
- \_\_\_\_\_ 6) "Single" chromosomes uncoil back into chromatin as the spindle disappears and the nuclear membrane reappears
- \_\_\_\_\_ 7) Homologous chromosome pairs line up straddling the cell's equator
- \_\_\_\_\_ 8) DNA exists as chromatin and growth and DNA replication occur
- \_\_\_\_\_ 9) "Double" chromosomes uncoil back into chromatin as the cleavage furrow splits the cell into 2 **haploid** daughter cells
- \_\_\_\_\_ 10) Spindle fibers retract, ripping the "double" chromosomes in half at the centromere
- \_\_\_\_\_ 11) Chromatin coils tightly into visible "double" chromosomes as the nuclear membrane disappears from this **haploid** cell
- \_\_\_\_\_ 12) Cytokinesis happens producing 4 haploid gametes
- \_\_\_\_\_ 13) see diagram #13
- \_\_\_\_\_ 14) see diagram #14
- \_\_\_\_\_ 15) see diagram #15
- \_\_\_\_\_ 16) see diagram #16
- \_\_\_\_\_ 17) see diagram #17
- \_\_\_\_\_ 18) see diagram #18



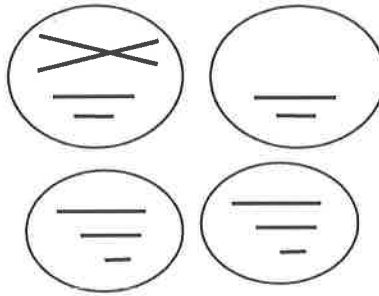
## Meiosis Review BTR

**What Went Wrong During Meiosis?** First study your Meiosis FLIP BOOK diagrams ( $2n=6$ ) and then identify what went wrong during meiosis (to create each gamete diagram below at the end of meiosis) by matching the appropriate choices from the list below:

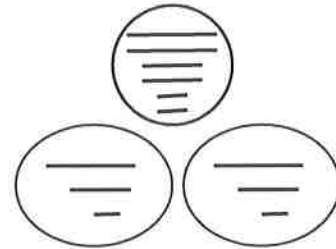
- |  |   |
|--|---|
| <p>A) 1 spindle fiber pair was broken during Anaphase 1</p> <p>B) 1 spindle fiber pair was broken during Anaphase 2 in 1 cell</p> <p>C) 1 spindle fiber pair was broken during Anaphase 2 in both cells</p> <p>D) 2 spindle fiber pairs were broken during Anaphase 1</p> <p>E) 2 spindle fiber pairs were broken during Anaphase 2 in 1 cell</p> <p>F) 2 spindle fiber pairs were broken in Anaphase 2 in both cells</p> <p>G) The chromatin NEVER replicated</p> | <p>H) Cytokinesis failed to happen after Telophase 1</p> <p>I) Cytokinesis failed to happen after Telophase 2 in 1 cell</p> <p>J) Cytokinesis failed to happen after Telophase 2 in both cells</p> <p>K) The centrioles never formed during Prophase 1</p> <p>L) Centrioles never formed during Prophase 2 in 1 cell</p> <p>M) Centrioles never formed during Prophase 2 in both cells</p> <p>N) The chromatin replicated twice</p> |
|--|---|



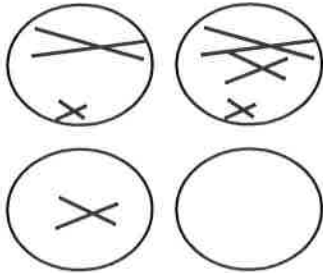
1. \_\_\_\_\_



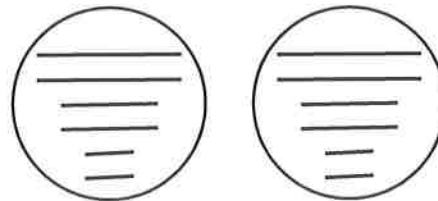
2. \_\_\_\_\_



3. \_\_\_\_\_



4. \_\_\_\_\_



5. \_\_\_\_\_

6. Suppose a testis cell is  $2n=8$ . Draw a diagram below of what the final result of Meiosis would look like if cytokinesis FAILED to happen after Telophase 2 in one daughter cell?