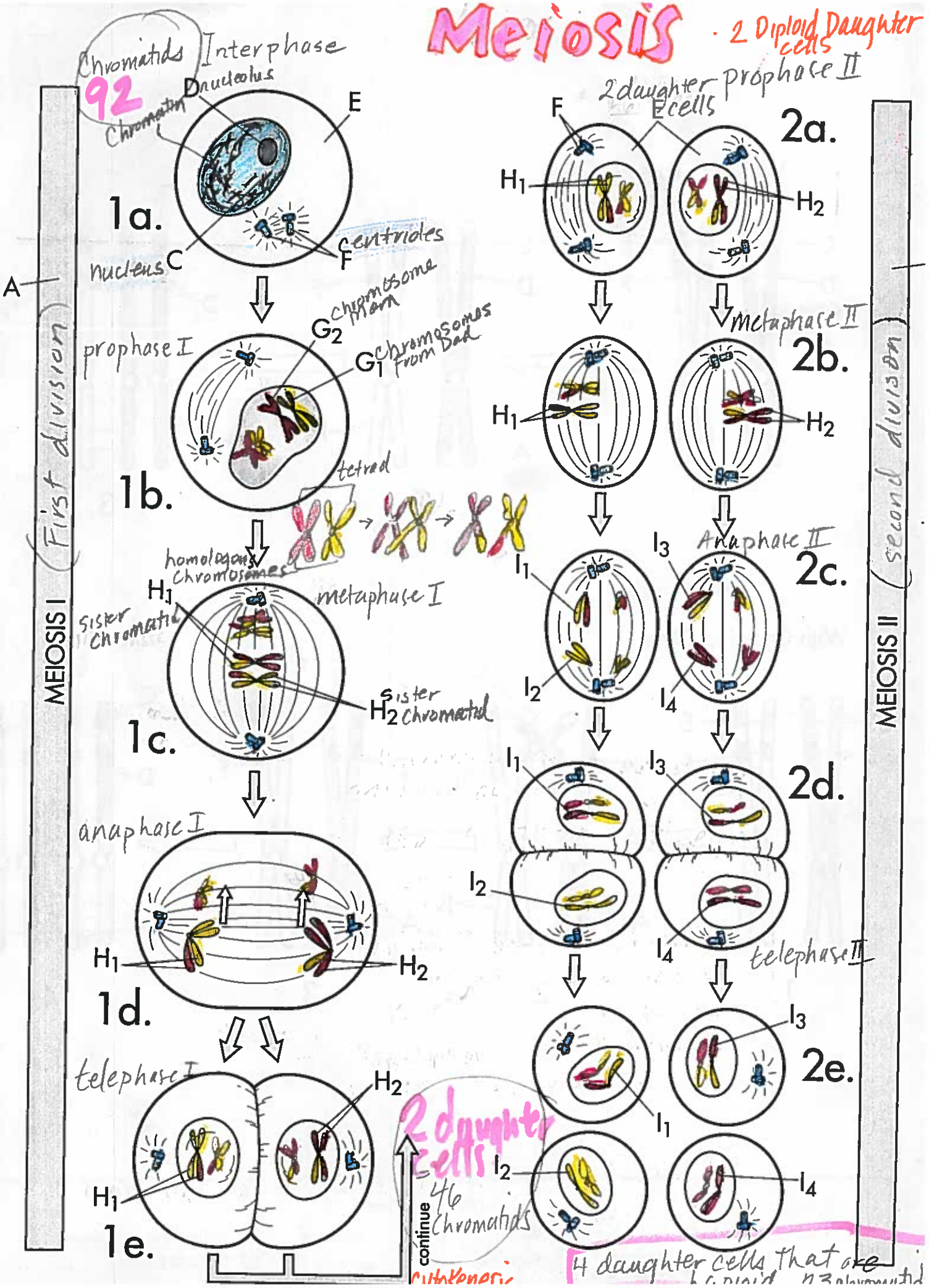
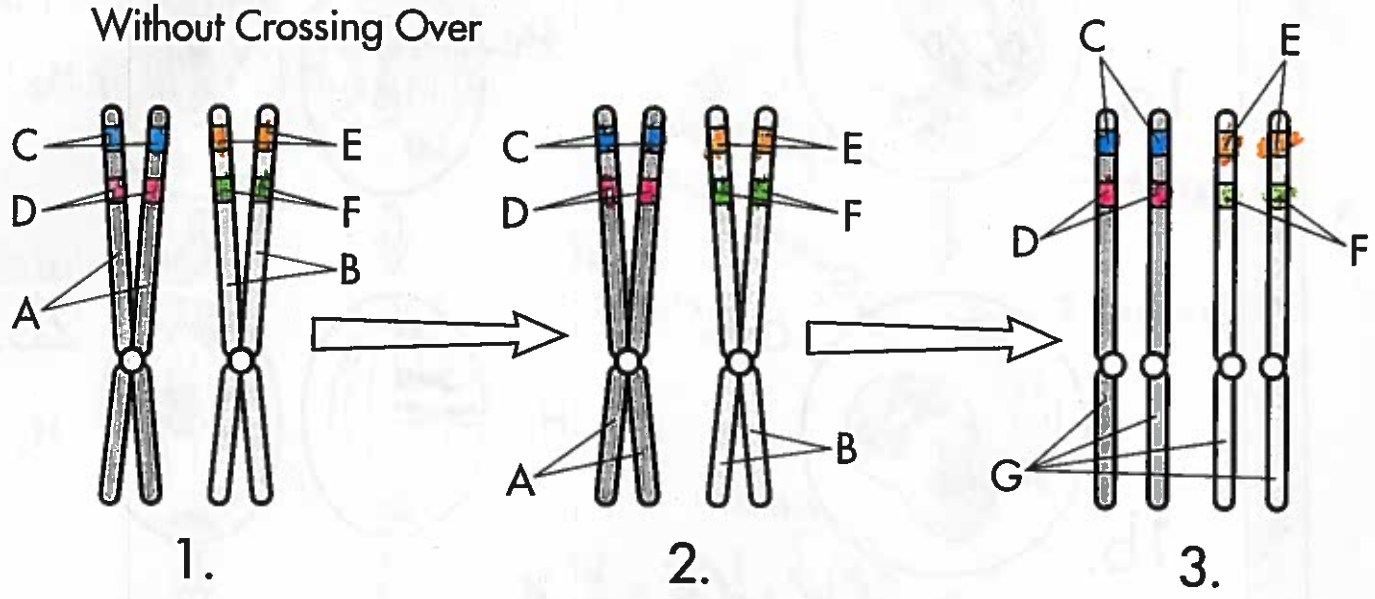
Meiosis

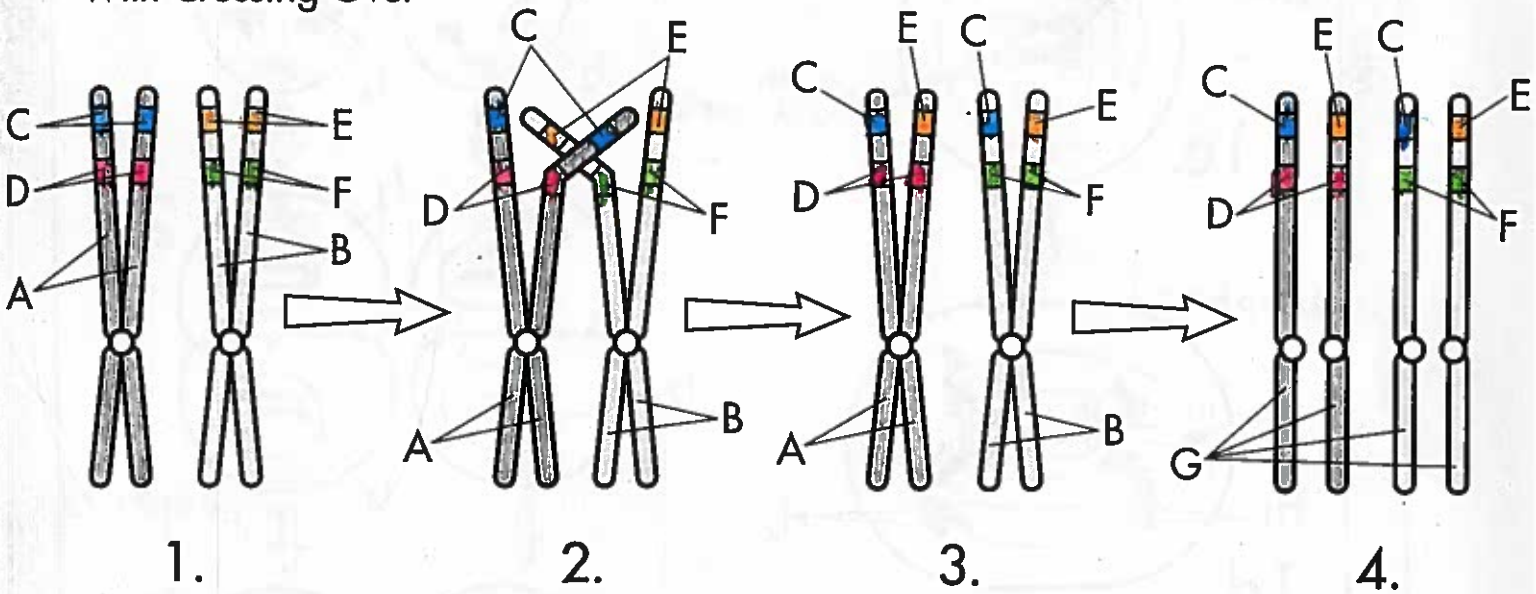
· 2 Diploid Daughter cells



Without Crossing Over



With Crossing Over



Crossing Over

- Sister Chromatids A....A
- Sister Chromatids B....B
- Gene 1 C
- Gene 2 .....D
- Gene 3 .....E
- Gene 4 .....F
- Chromosomes.....G

~~Kelsey Fletcher~~ Tracy Wilson: End Wednesday → Andrew Fogle: 3/14/17 → 7823

Meiosis Notes 3/21/17

Interphase: Very similar to mitosis. G_1, S, G_2 phase (growth period, replicates DNA, check over chromosomes for errors, & replicates organelles.

(92) chromatids

Prophase I: DNA or chromatin thickens into chromosomes; Homologous chromosomes pair up forming a → tetrad = (which is 4 chromatids together). The homologous chromosomes start crossing over, exchange of genetic material to make new versions of genes.

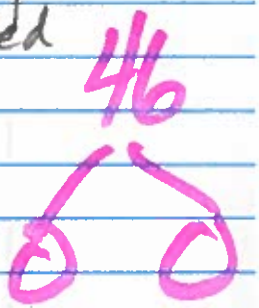
metaphase I = paired Homologous Chromosomes line up in the middle of the cell. Spindle fibers attach at the centromere.

anaphase I = cell is elongated (like an egg) spindle fibers pull each homologous chromosome towards Opposite poles.

telephase I - the cell starts to pinch off and the nuclei in the two cells reforms, 2 daughter cells are made - both still diploid (46 chromatids)

Cytokenesis = the first cytoplasmic division yield 2 daughter cells each with 46 chromosomes

prophase II - *Chromosomes do NOT pair up in tetrads, because homologous chromosomes were separated (meiosis I)
- Centrioles move to opposite poles
- nuclei start to break-down
- spindles form



Metaphase II - • chromosomes line up in the middle of the cell.
• spindle fibers attach at the centromere

Anaphase II -
- cells elongate & looks egg-like
- sister chromatids are pulled to opposite poles, (north/south)

Telaphase II • The two cells start to pinch off near the center of the cell
• nuclei are reforming (4 total)
• spindle fibers disappear

Cytokenesis - The seperation of the cytoplasm to make 4 New Daughter cells Each are genetic originals & are haploid