Ch 13.3 through Slide #22

Meiosis makes Gametes

Start with a diploid cell

* Has two sets of each gene (one from mom and one from dad)

Go through a series of steps to end up with cells that have HALF the number of genes (haploid cells)

These gametes are ready to join with another sex cell to re-make a diploid cell with a full set of DNA needed to create the organism

Meiosis breakdown

Meiosis I: Has Interphase

Interphase 🡪Meiosis I 🡪 Prophase I 🡪 Metaphase I 🡪 Anaphase I 🡪 Telophase I 🡪

🡪 Cytokinesis

Meiosis II: There isn’t another Interphase

Prophase II 🡪 Metaphase II 🡪 Anaphase II 🡪 Telophase II 🡪 Cytokinesis

Interphase

Same as in Mitosis

* Start with a diploid cell
* This cell has one set of chromosomes from mom and one from dad
* In humans, we start with 46 chromosomes (23 from mom and 23 from dad)
  + Chromosomes duplicate (now there are 92 chromosomes)

You don’t get any NEW information, just more of the information you already have. (You have two copies of the same book)

Now you have two copies of the chromosomes you got from mom and two copies of the chromosomes you got from dad

* These look like the little X structures where the two identical copies are attached to each other at the centromere
* These identical chromosomes are called sister chromatids

Before and after interphase DNA amounts

Calendar

Description automatically generatedA close-up of some writing

Description automatically generated with low confidence

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