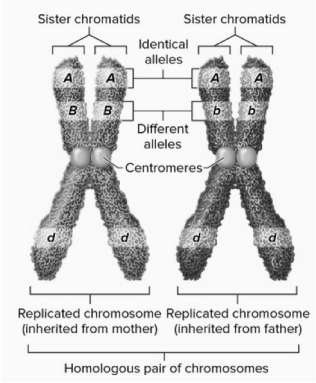
1



Diploid cells contain two full sets of chromosomes, with one set coming from each parent.

This diagram shows one replicated homologous pair of the 23 pairs in human cells. Pay attention to chromatids and alleles.

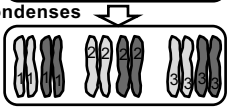
2

Meiosis in a nutshell

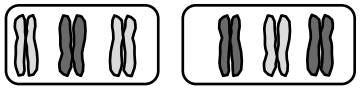
One diploid cell (2*n*=6)

DNA replicates/condenses

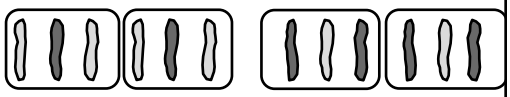
Use arrows and numbers to show where chromosomes in daughter cells came from.



Meiosis I



Meiosis II



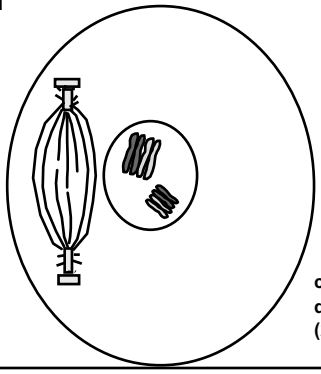
4 haploid daughter cells (*n*=3)

[Not shown: Crossing over in meiosis I]

3

(Interphase occured before prophase I but is not shown in handout)

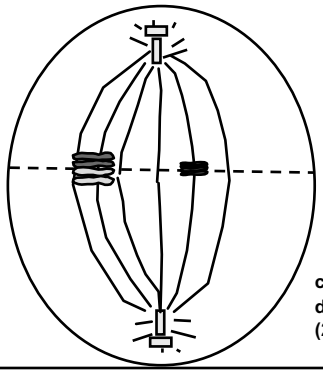
Prophase I



cell is diploid (2n=4)

4

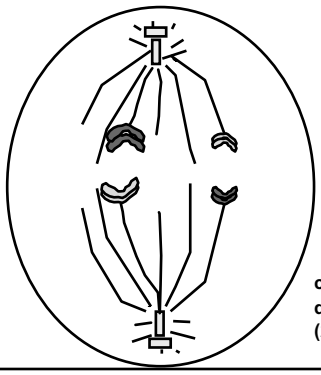
Metaphase I



cell is diploid (2n=4)

5

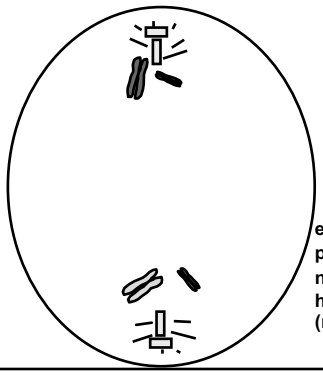
Anaphase I



cell is diploid (2n=4)

6

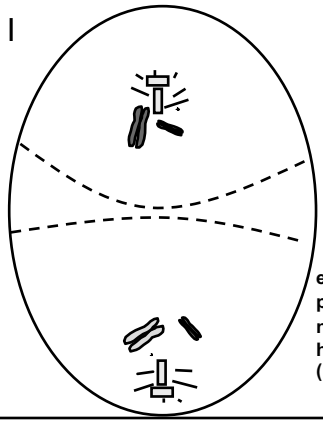
Telophase I



each pole is now haploid (n=2)

7

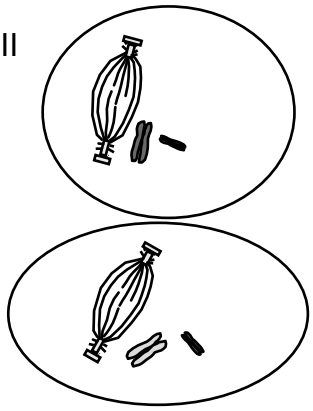
Telophase I



each pole is now haploid (n=2)

8

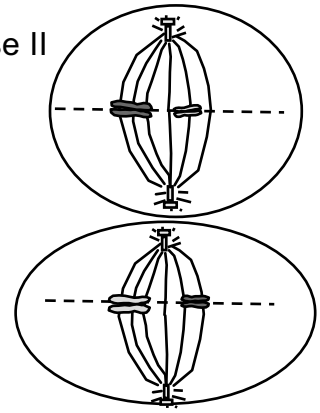
Prophase II



each cell is haploid (n=2)

9

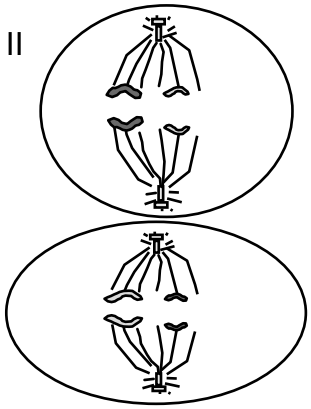
Metaphase II



each cell is haploid (n=2)

10

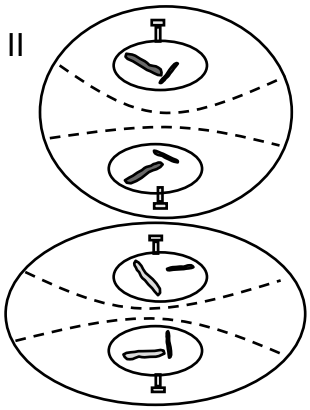
Anaphase II



each cell is haploid (n=2)

11

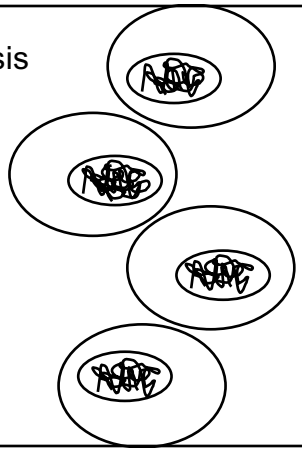
Telophase II



each cell is haploid (n=2)

12

Cytokinesis



each cell is haploid (n=2)