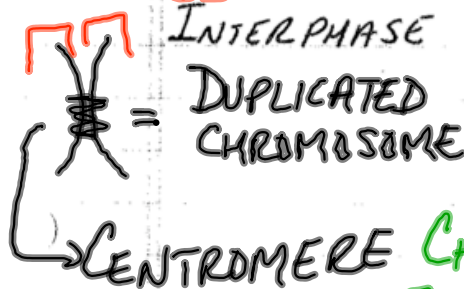


MEIOSIS

GOAL: SPECIAL KIND OF CELL DIVISION
TO MOVE FROM DIPLOID GERM

IDENTICAL
SISTER
CHROMATIDS
CELLS ($2n$) TO
HAPLOID GAMETES (n)



INTERPHASE

DUPLICATED
CHROMOSOMEHOMOLOGOUS
PAIRS

COMPATIBLE

CHROMOSOMES

SAME SIZE, SHAPE,

HAVE GENETIC INFO. FOR SAME TRAITS
BUT DIFF. ALLELES.

PROPHASE I

NUCLEAR MEM. BREAKS DOWN
"SPINDLE FORMS" CENTRIOLES
MOVE OPPOSITE POLES,
MAKE SPINDLE FIBERS

ATTACH CENTROMERE

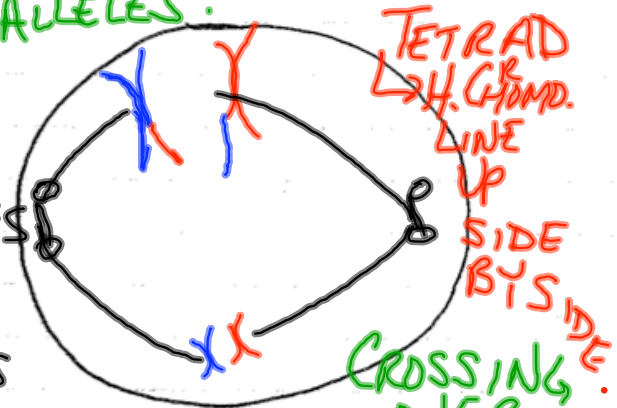
OF EACH DUP. CHROMOSOME

EXCHANGED BETWEEN

NON-SISTER

CHROMATIDS

OF A TETRAD.

TETRAD
H. CHROM.
LINE UPSIDE
BY SIDECROSSING
OVER

EQUAL AMTS.

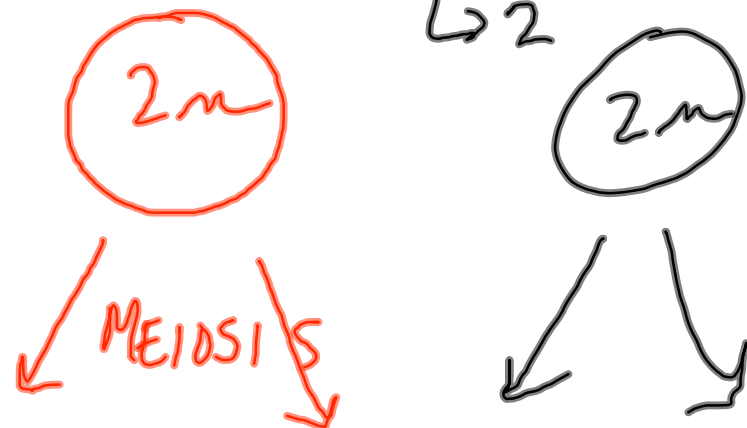
OF GENETIC

MATERIAL ARE

n = COMPLETE
SETS OF
DNA

GERM
CELLS

$2n$ = DIPLOID
↳ 2



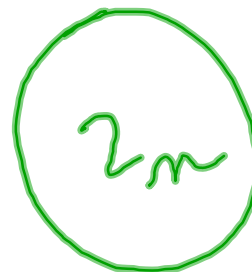
EGG
GAMETES



SPERM
GAMETES

HAPLOID
↳ ONE COMPLETE
SET.

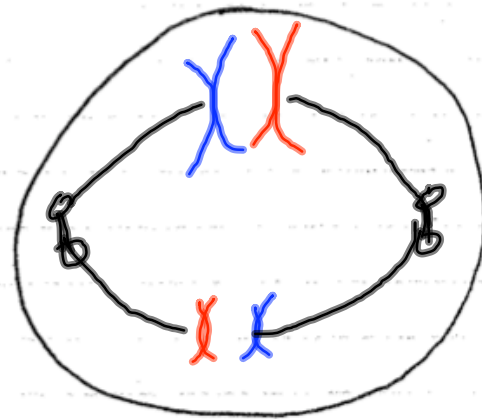
ZYGOTE



METAPHASE I

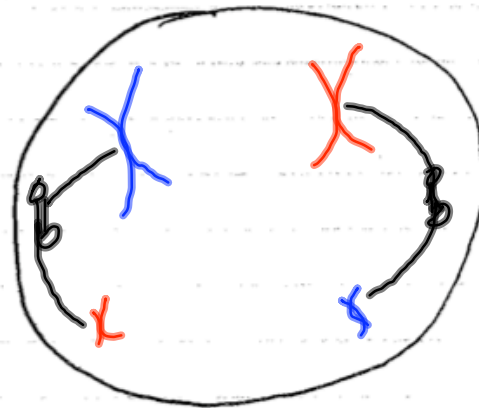
MIDDLE

HOMOLOGOUS PAIRS
(TETRAADS) LINE UP
SIDE BY SIDE
@ EQUATOR



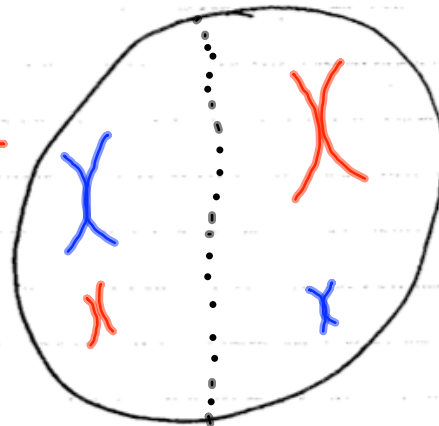
ANAPHASE I

HOMOLOGOUS
PAIRS WILL BE
PULLED TO OPPO. POLES.

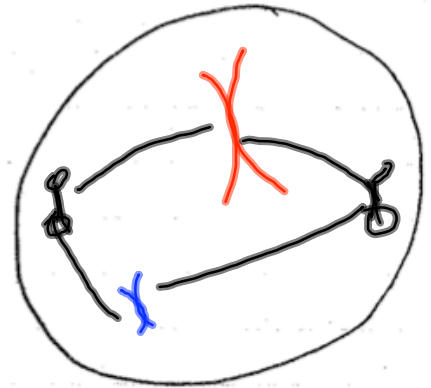
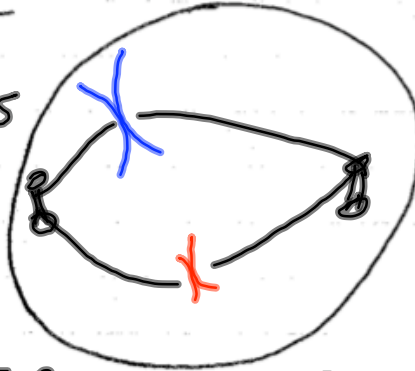


TELOPHASE I

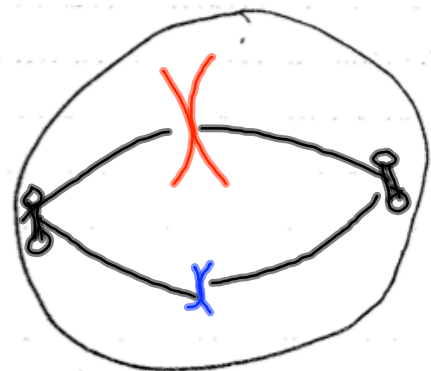
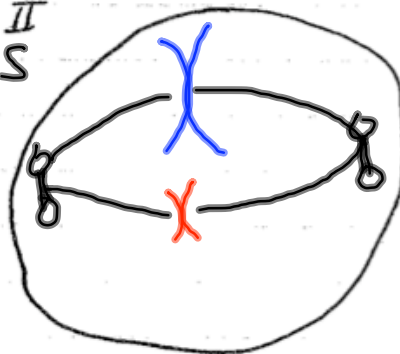
DUP. CHROMOSOMES
REACH OPPOSITE
POLES AND
CELL WILL
DIVIDE



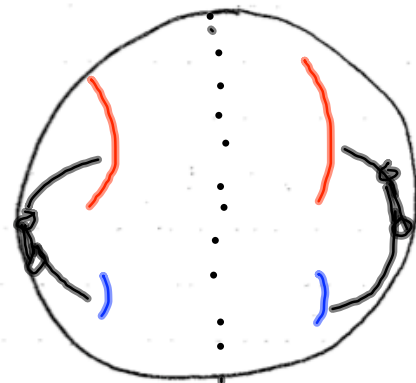
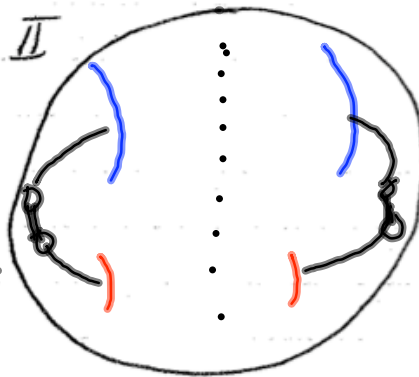
PROPHASE II
SPINDE RE-FORMS
& SPINDLE
FIBERS ATTACH
TO EACH
DUPLICATE CHROMOSOME



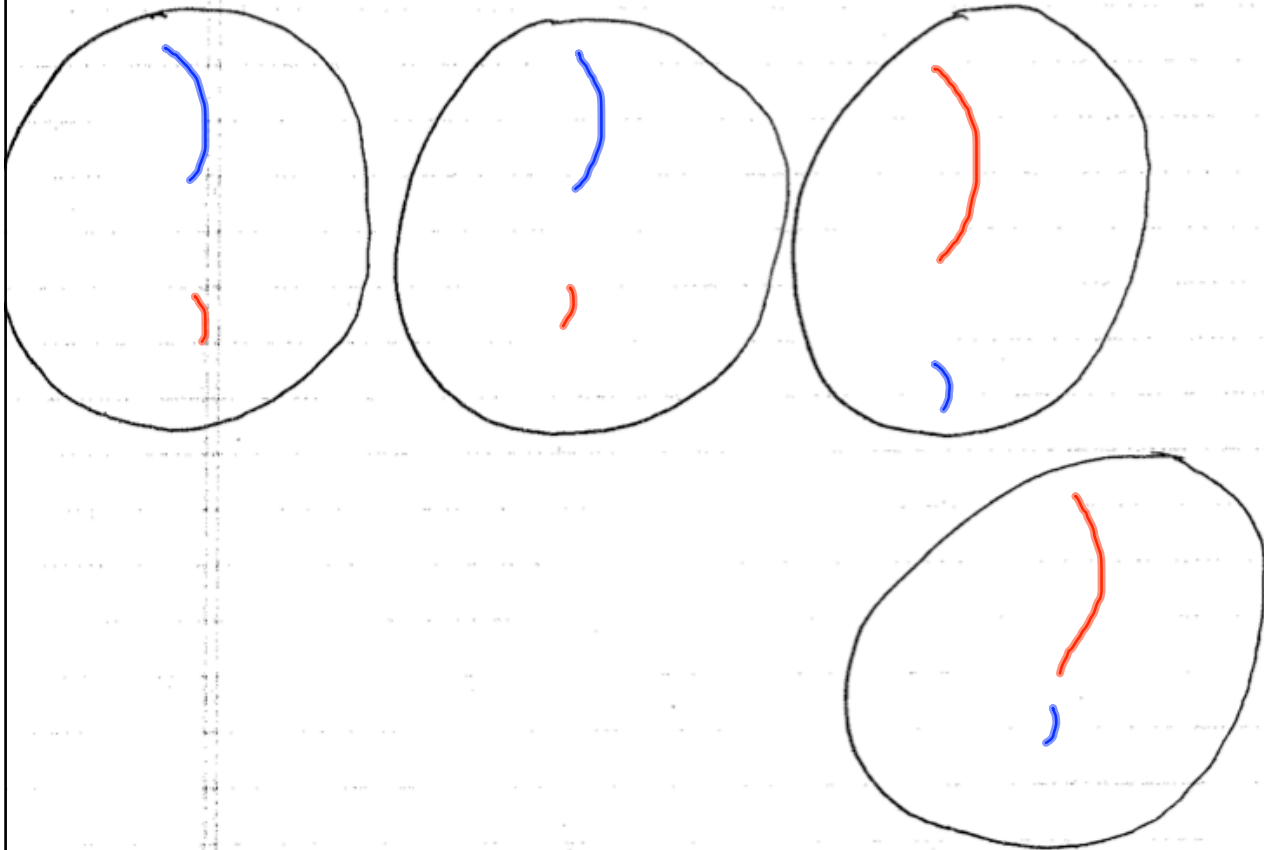
METAPHASE II
DUP. CHROMOSOMES
LINE UP HEAD TO
TOE @ EQUATOR



ANAPHASE II
DUP. CHROMO.
SEP. UN DUP.
CHROMOSOMES
MOVE OPPOSITE
POLES.



TELOPHASE II



AT WHAT PHASE IS THE COMBINATION
OF CHROMOSOMES THAT WILL END
UP IN GAMETES ESTABLISHED?

METAPHASE
I

