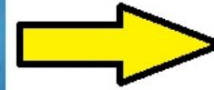
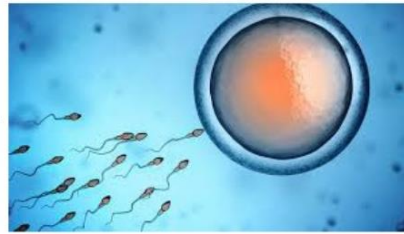
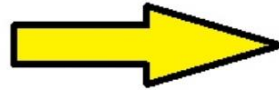
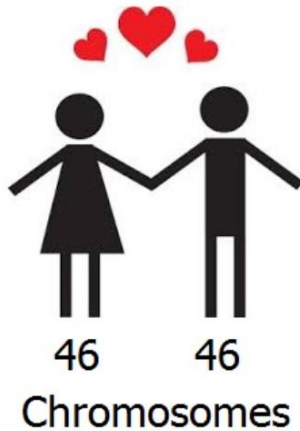


WELCOME BACK!

1/7/20

READ THE FOLLOWING QUESTION ... DO YOU KNOW THE ANSWER?



46
Chromosomes

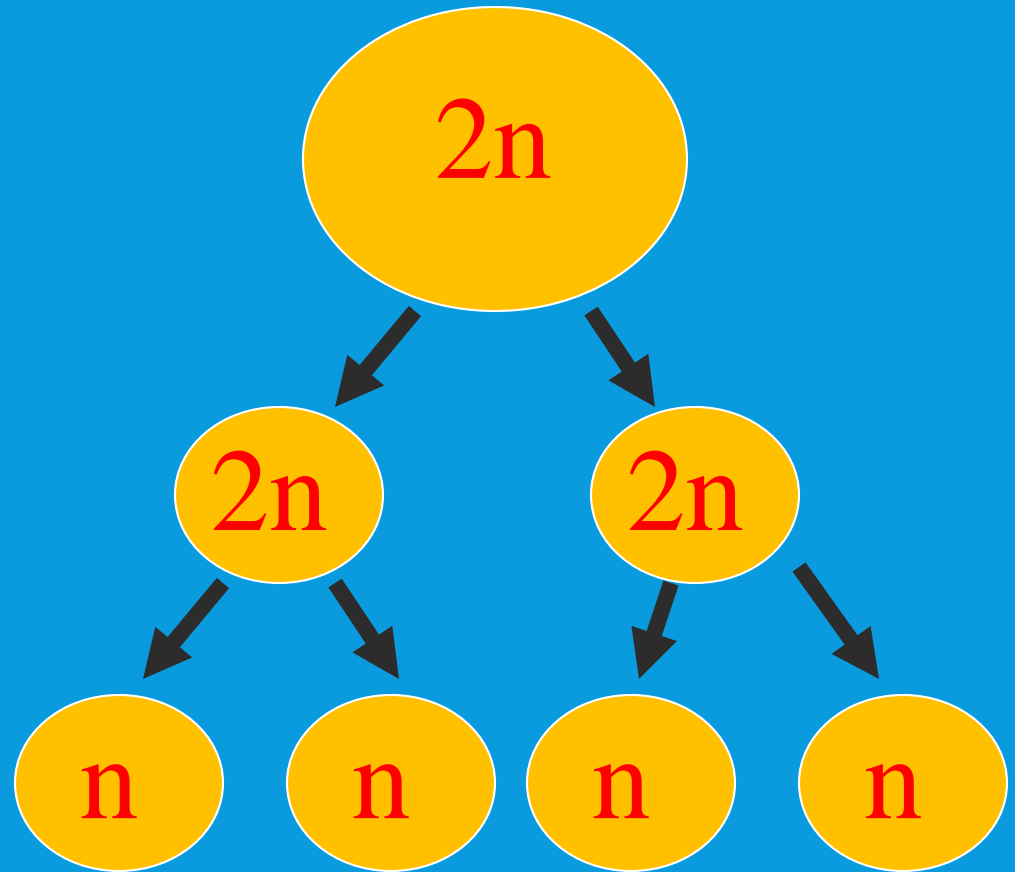
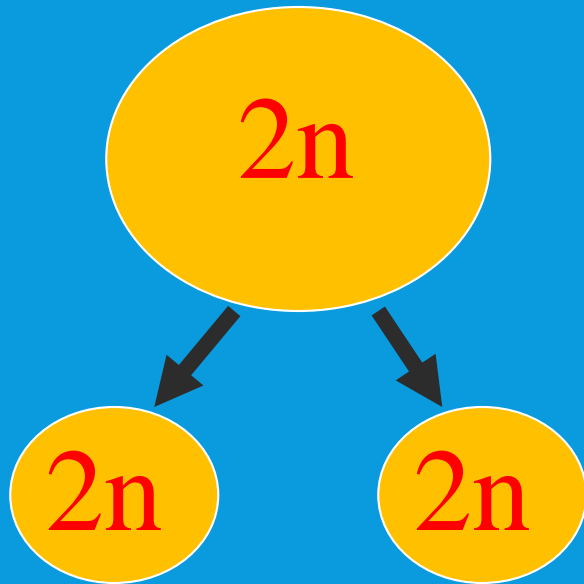
How can two cells from an organism each with 46 chromosomes unite and have an offspring with 46 chromosomes?

MEIOSIS

The Basis of Heredity

MITOSIS

MEIOSIS



MEIOSIS . . .

- Cell division in reproductive cells (ovaries, testes)
- One cell divides twice into four **NON-IDENTICAL** cells
- Meiosis is for reproduction, creates egg and sperm

PHASES OF MEIOSIS

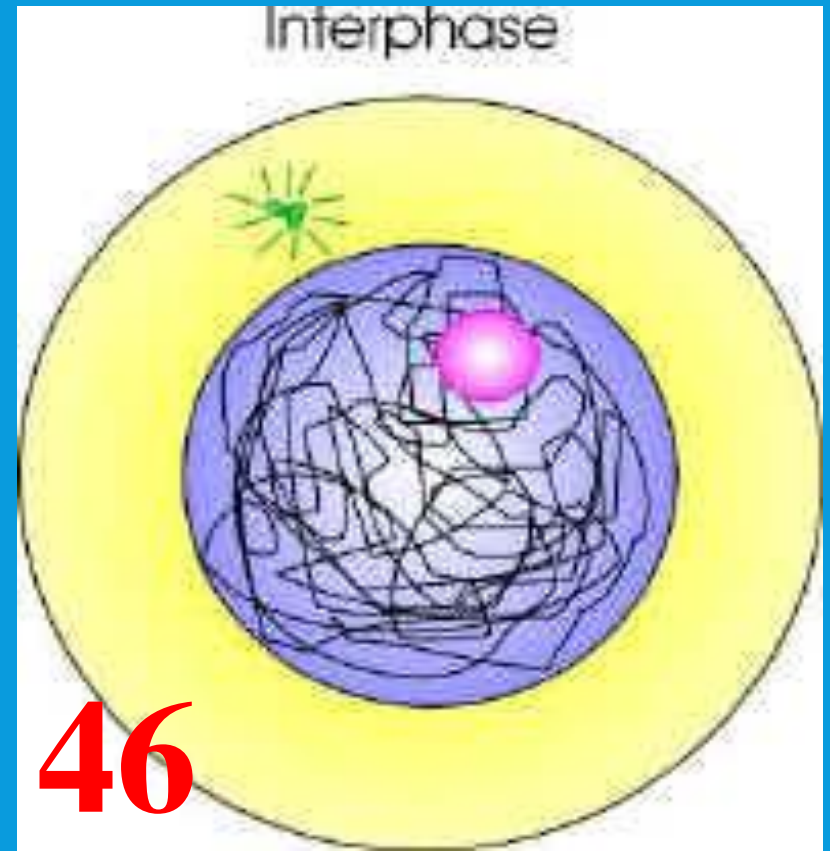
Fill out your chart with the information that follows.

Left column is Meiosis I

Right column is Meiosis II

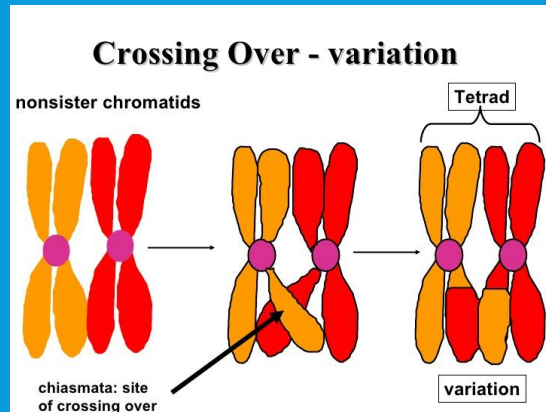
INTERPHASE I

- One cell prepares to divide
- DNA replicates
- Half your DNA is from mom and half is from your dad!

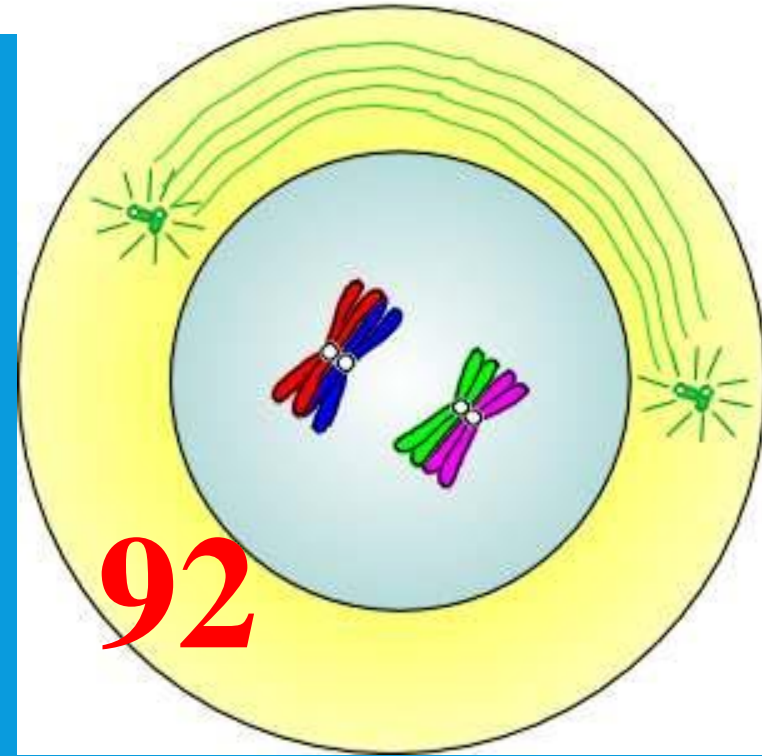


PROPHASE I

- Chromosomes double- so they are visible as a group of 4
- DNA is NOT identical due to crossing over:

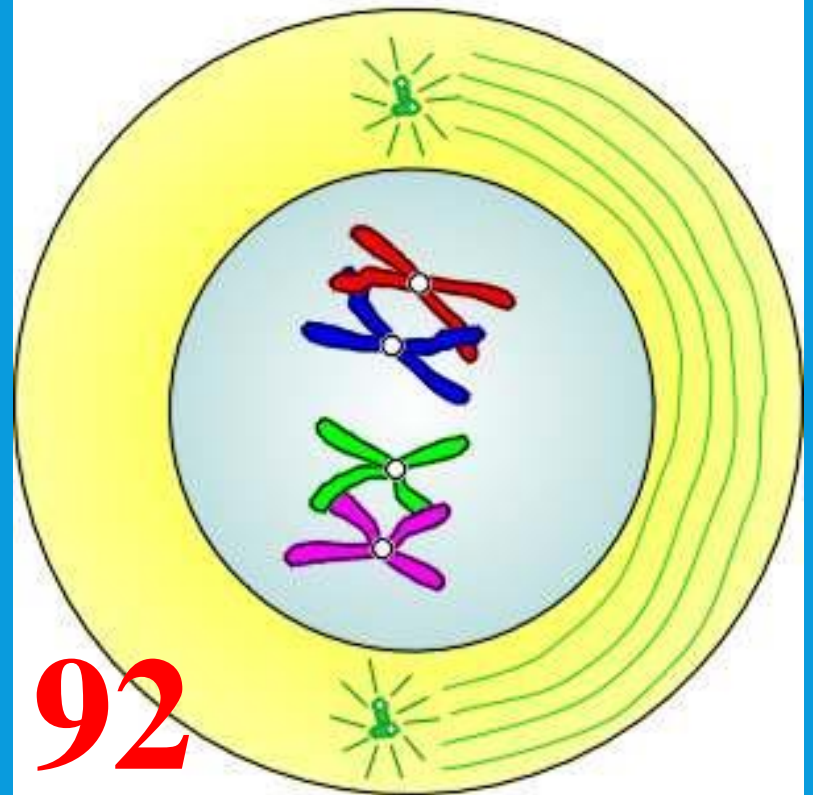


- Crossing over results in each chromosome having different DNA - leads to genetic variation



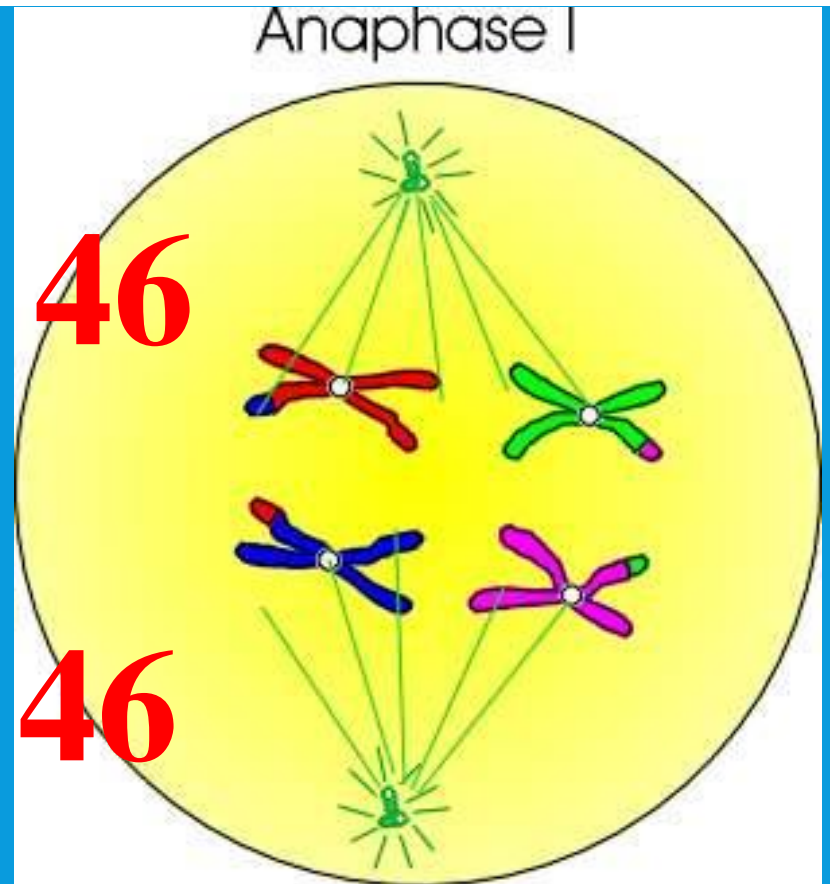
METAPHASE I

- move to middle



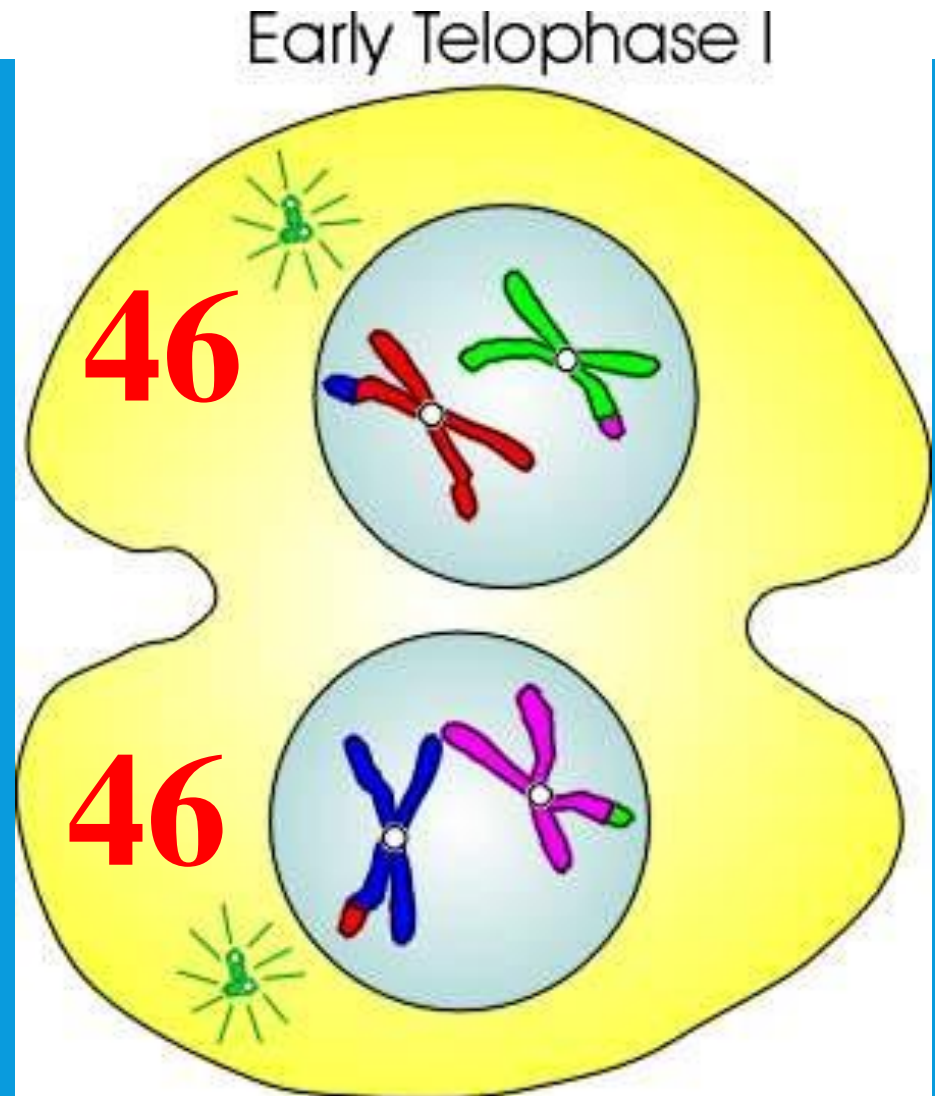
ANAPHASE I

- move apart



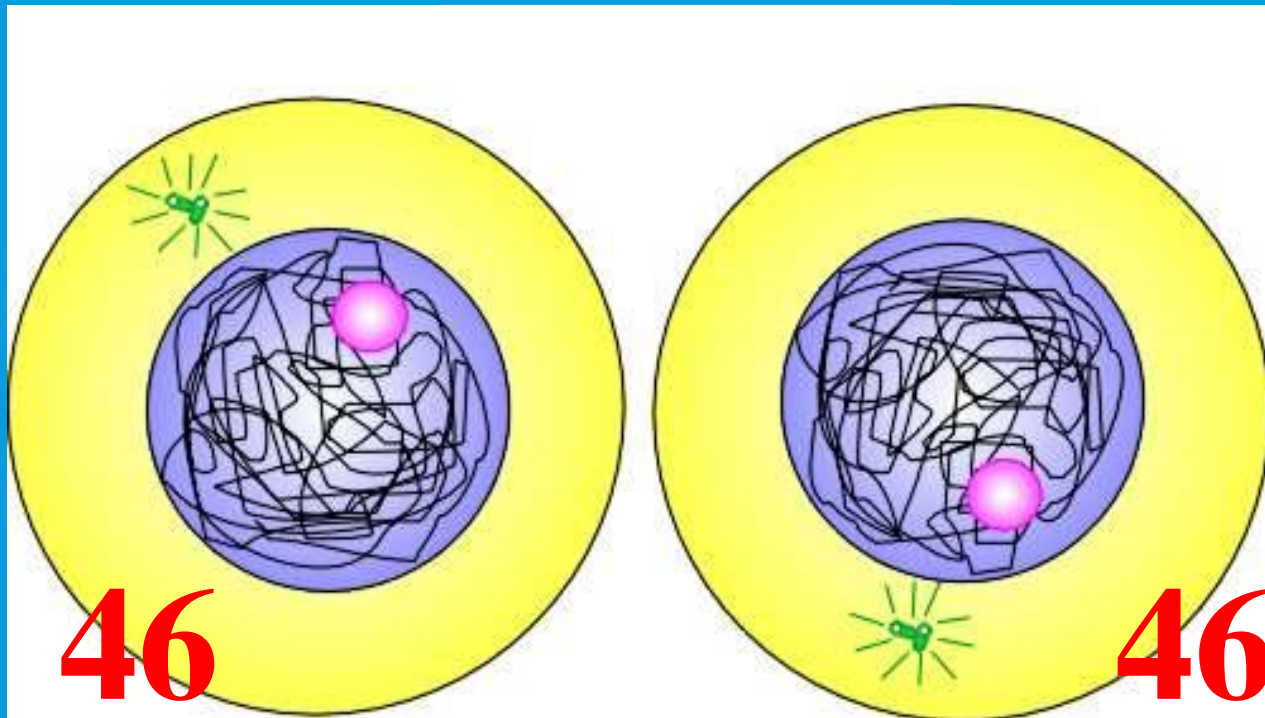
TELOPHASE I

- Two new cells
They are NOT identical



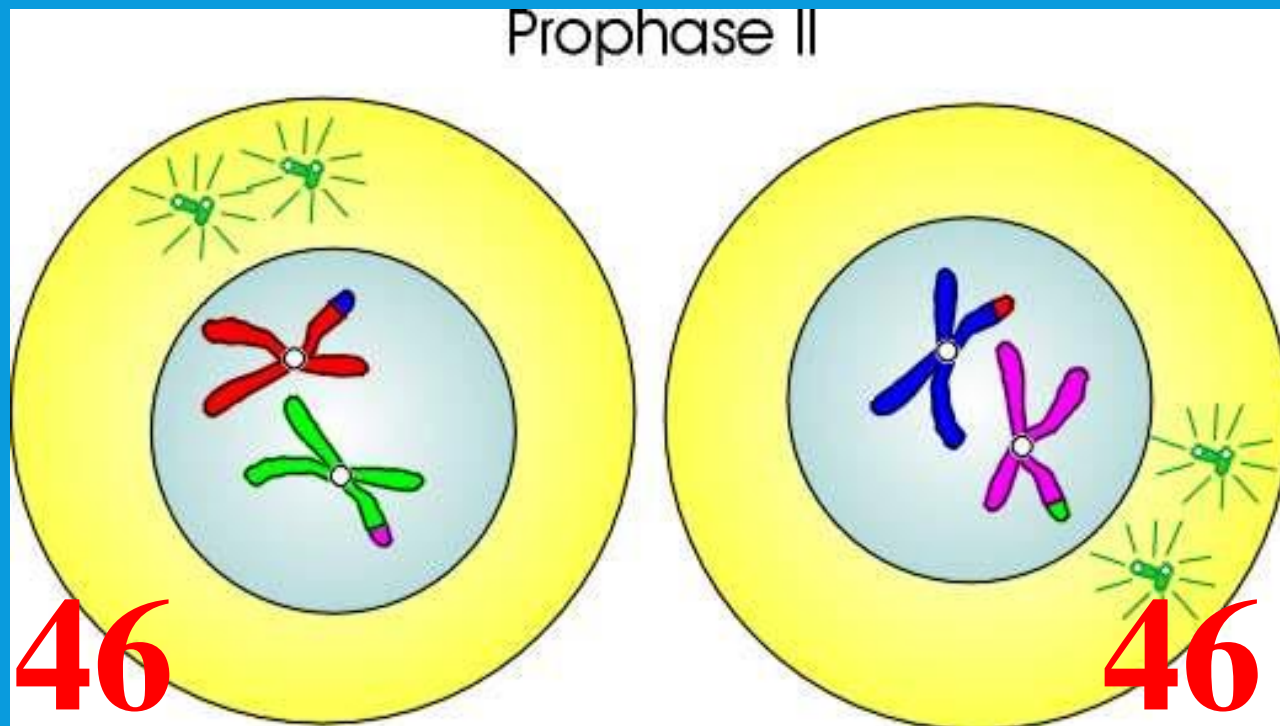
CYTOKINESIS

- Cytokinesis results in two cells, NOT identical to each other!



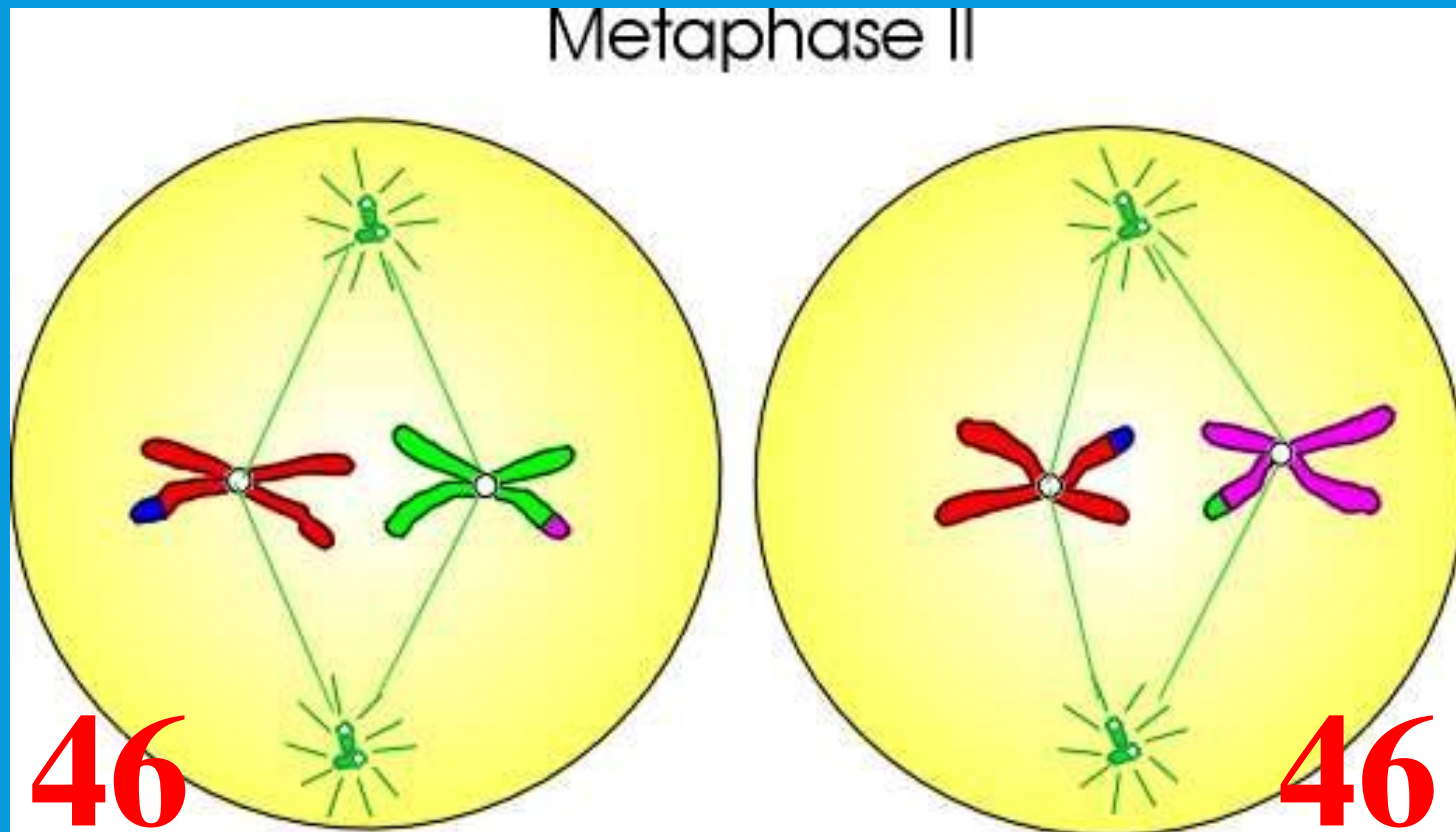
PROPHASE II

- Chromosomes are in pairs
- NOT identical



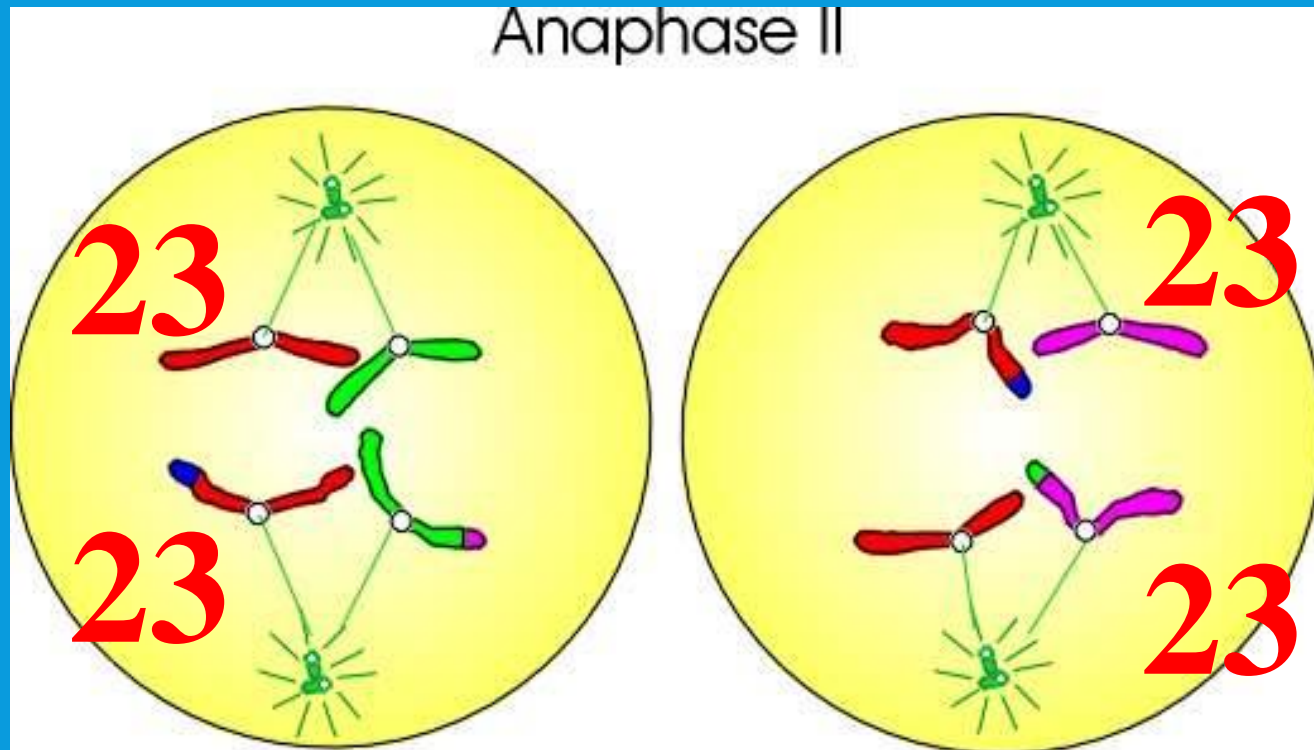
METAPHASE II

- Pairs line up in middle



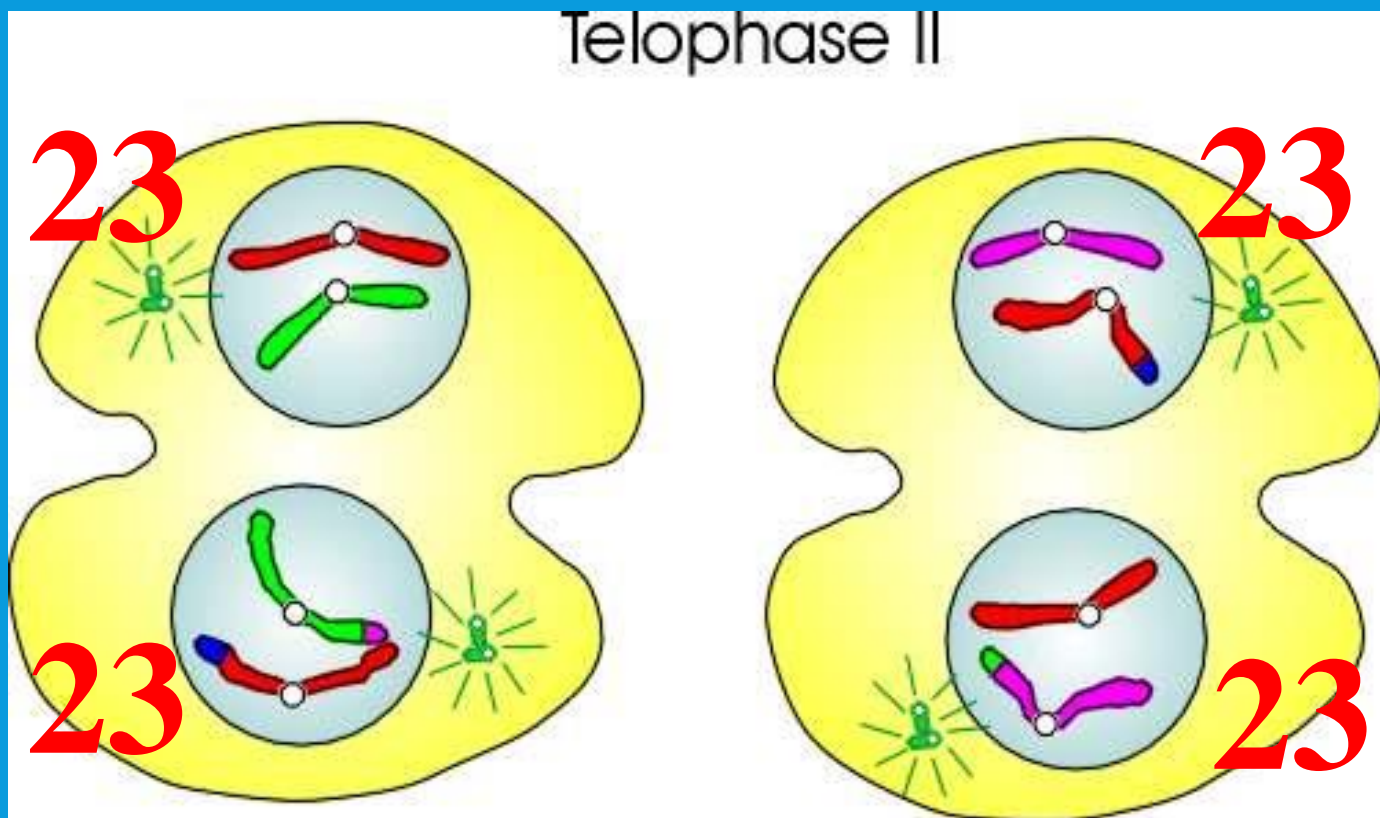
ANAPHASE II

- Move apart



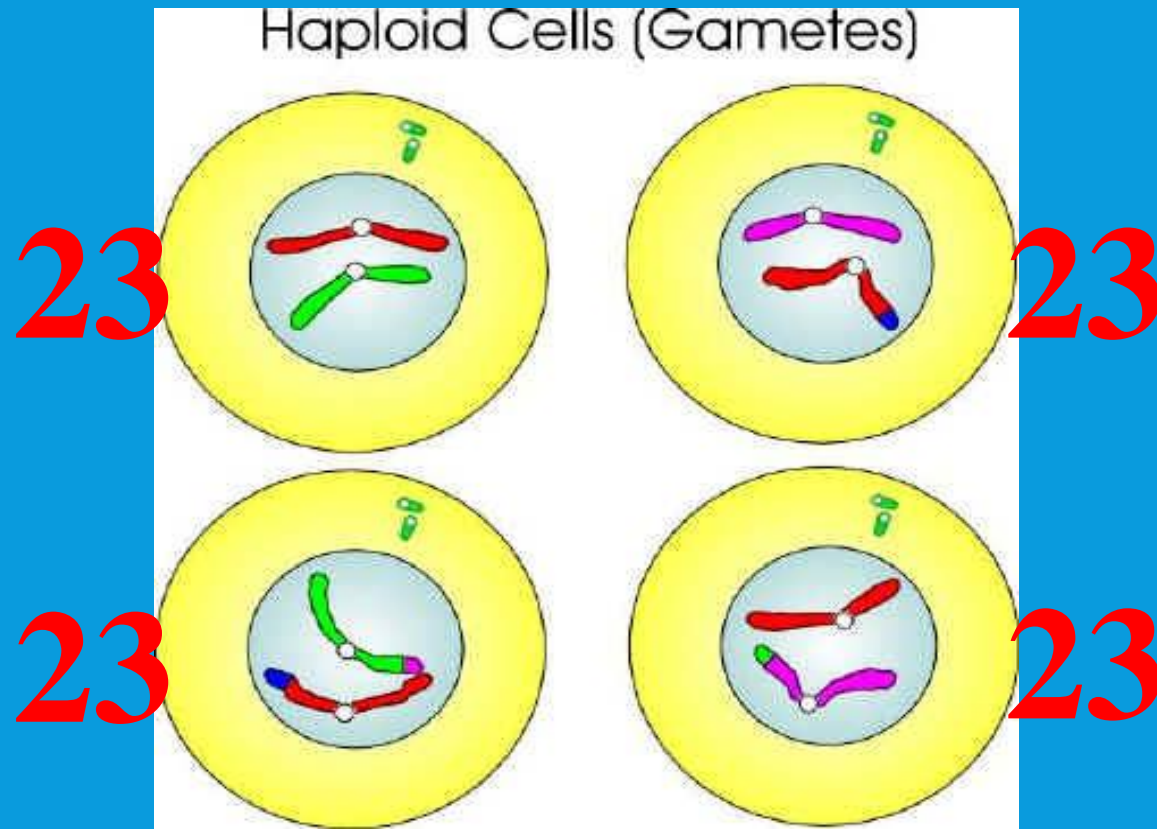
TELOPHASE II

- Four new haploid non-identical cells are formed



END RESULT OF MEIOSIS

- In males = 4 sperm (not identical)
- In females = 1 egg, 3 reabsorbed



SEXUAL REPRODUCTION:



Results in zygote (fertilized egg cell)