Name: _____ **CELL DIVISION REVIEW**

1. Relate chromosomes, DNA, genes and proteins.

chromo made of DNA, genes a section of DNA, gene codes to make a protein

2. How many chromosomes in a human somatic cell? Gamete?

46 23

3. Why are the chromosomes paired?

inherited from mom & Dad

4. What is a diploid number? Haploid?

2 of each homol chromo → 1 of each type (homol) chromo

meiosis sex cells only

5. Place cells of mitosis and meiosis in the correct order.

6. What is the main difference between plant and animal mitosis?

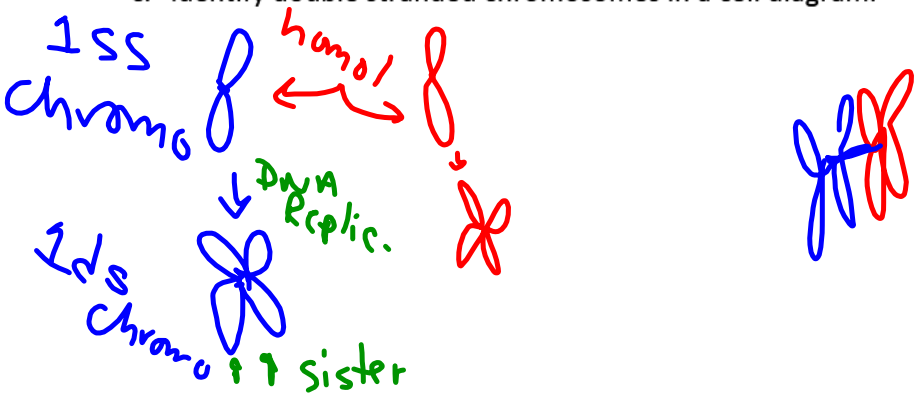
see back

7. What is the result of mitosis? Meiosis?

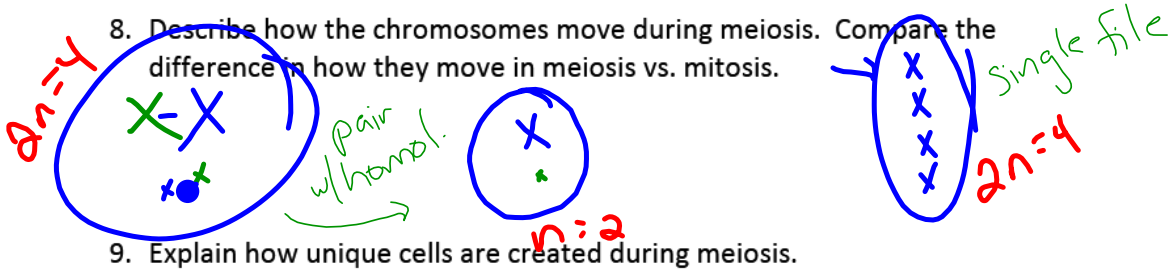
a. # of cells 2 somatic body | 4 gamete sex cells

b. Types of cells identical | ½ chromo

c. Identify double stranded chromosomes in a cell diagram.



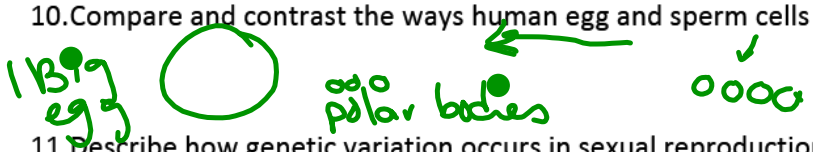
8. Describe how the chromosomes move during meiosis. Compare the difference in how they move in meiosis vs. mitosis.



9. Explain how unique cells are created during meiosis.

crossing over
mutation
random alignment of homolg. chroms
fertil.

10. Compare and contrast the ways human egg and sperm cells are produced.



11. Describe how genetic variation occurs in sexual reproduction.

crossing over, homol pairs line up, fertilization

12. What are the pros and cons of asexual and sexual reproduction?

Asexual C - lack of diversity, 2 cells, identical, mutation rate
P: identical, fast
Sexual
P: diversity C - slower, more complex, 4 cells, 2 parents

13. Explain the cycle of life using the terms, mitosis, meiosis, zygote and fertilization.

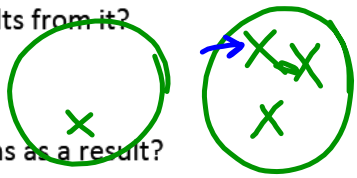
meiosis → fertiliz → zygote → mitosis → adult

14. Place cells of mitosis and meiosis in the correct order.

15. What is the main difference between plant and animal mitosis?

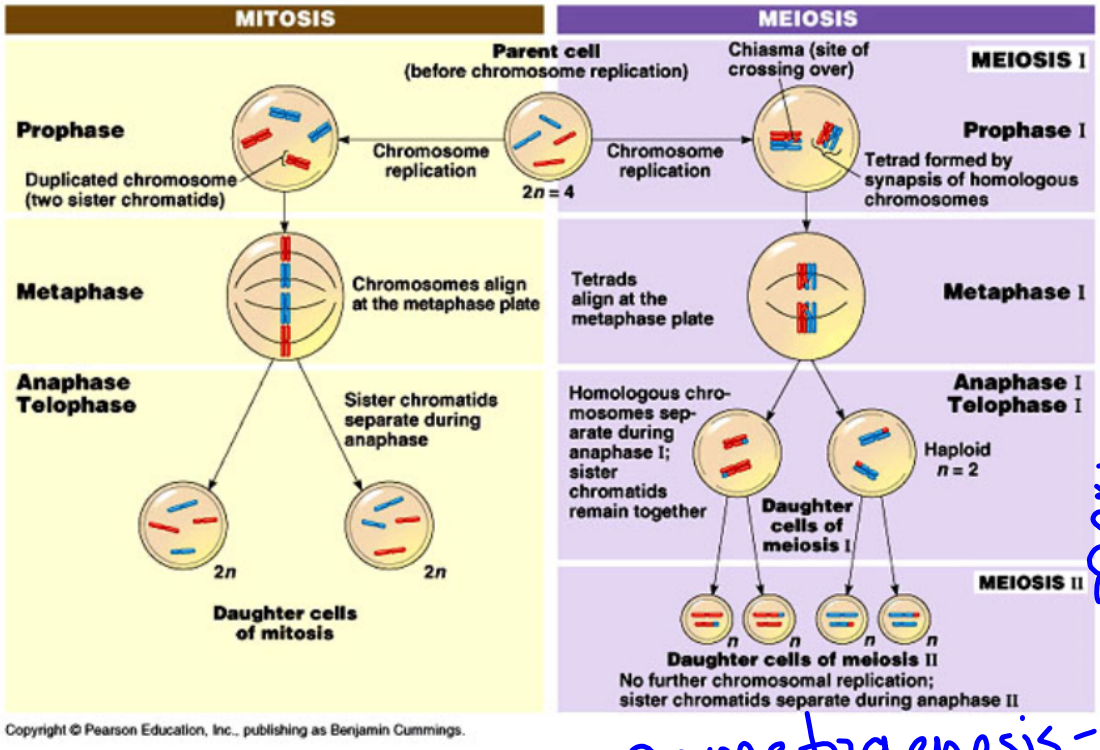
cell wall
cell plate
memb: pinch
centrioles - make spindle fibers

16. What is non-disjunction? What results from it?



17. What is crossing over? What happens as a result?

18.



gametogenesis - making gametes

Oogenesis

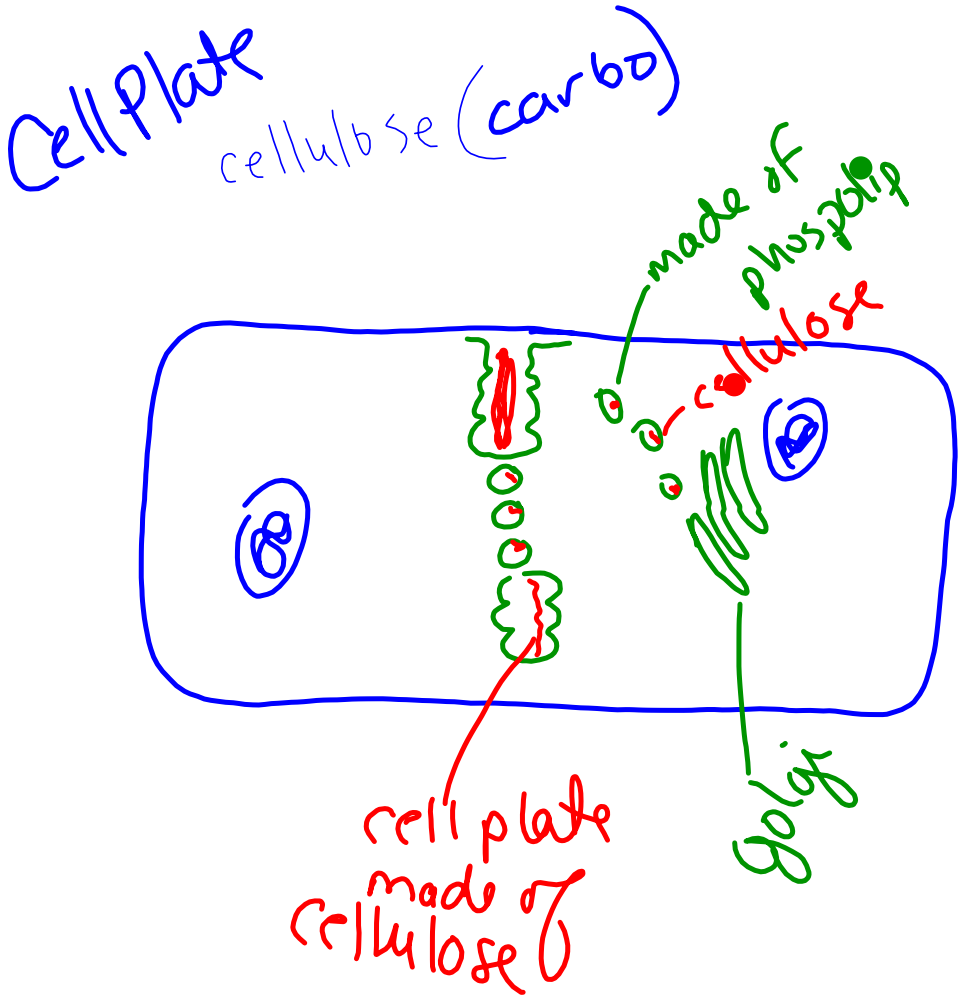
diploid 46 XX

uneven cytoplasmic division

haploid 23 X

dies

1 haploid 23


Cell Plate
cellulose (carb)
made of phospolip
& cellulose
cell plate made of cellulose
golgi