

Name \_\_\_\_\_

## Meiosis – Internet Lesson

In this investigation, you will view sites that illustrate the process of meiosis. For each site answer the questions associated.

### Site 1 – Lew-Port’s Meiosis Page

Go to [Lew-Port’s Biology Place](#) and read the text. Then click on the arrow to learn about meiosis.

1. How many chromosomes does the cell in this animation start with ? \_\_\_\_\_
2. The homologous pairs are represented by similar \_\_\_\_\_
3. Copies of chromosomes are held together by the \_\_\_\_\_
4. Each chromosome finds its \_\_\_\_\_
5. Draw “crossing over” – using your pencil to shade in the areas that exchange parts.
  
6. How many chromosomes are at each pole of the cell? \_\_\_\_\_
7. During meiosis 2, chromosomes line up again along the cell’s \_\_\_\_\_
8. Only \_\_\_\_\_ copy of each chromosome moves toward the poles. Which means only \_\_\_\_\_ chromosomes of the original six.
9. New membranes form around each \_\_\_\_\_
10. Each cell divides, forming a total of \_\_\_\_\_ cells.

### Site 2 – Sumanas Inc., Animation of Meiosis

Go to the [Sumanas](#) web site → click on General Biology, then click on Meiosis

11. Read the introduction. Explain the difference between sexual and asexual reproduction.

### Click on Narrated

12. DNA replication takes place when? \_\_\_\_\_
13. Meiosis consists of two cell divisions: \_\_\_\_\_ & \_\_\_\_\_
14. Centrosomes (aka centrioles) migrate to \_\_\_\_\_
15. The pairing of homologous chromosomes is called: \_\_\_\_\_
16. Crossing over points are called \_\_\_\_\_
17. What happens in metaphase I \_\_\_\_\_
18. What happens during anaphase I \_\_\_\_\_
19. What is interkinesis? \_\_\_\_\_

20. In prophase II, each cells is [ diploid / haploid ] (circle)  
 21. In metaphase II, chromosomes line up in [ single | double ] file.  
 22. What happens during telophase II? \_\_\_\_\_  
 23. (Click to Conclusion). Each of the four daughter cells produced by meiosis is [ identical / unique ]

**Click on Quiz**

24. With respect to meiosis, when does DNA replication occur? \_\_\_\_\_  
 25. When does crossing over occur? \_\_\_\_\_  
 26. During which phase do chromosomes line up along the equator? \_\_\_\_\_  
 27. During which phase does the nuclear membrane form around the chromosomes? \_\_\_\_\_

**Site 3 – Biology in Motion - Meiosis**

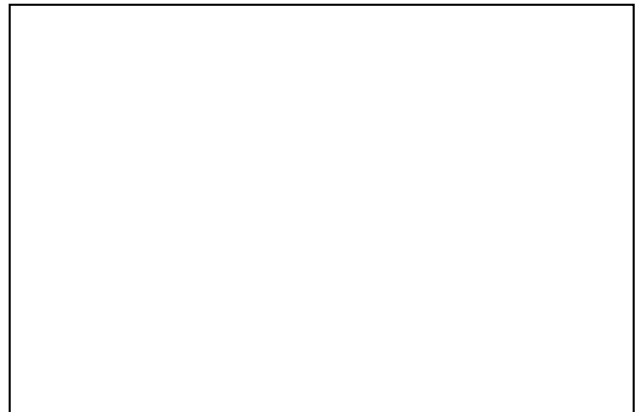
Go to [www.biologyinmotion.com](http://www.biologyinmotion.com) → click on “Cell Division Exercise” → Click on “Practice Meiosis”

28. There are two ways in which the chromosomes can end up after meiosis. Sketch the two ways and indicate by color the chromosomes (use the following color codes: Purple, Dark Purple, Green, Dark green)

Possibility 1



Possibility 2



**Site 4: PBS: Mitosis vs. Meiosis**

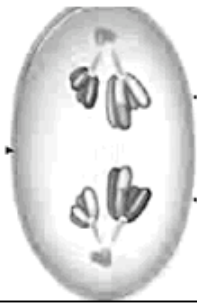
<http://www.pbs.org/wgbh/nova/baby/> → Click on “How Cells Divide” → Read the Introduction and then Click on “Mitosis vs. Meiosis”

29. After viewing the animation. Fill out the chart below, by placing a check in the box or boxes.

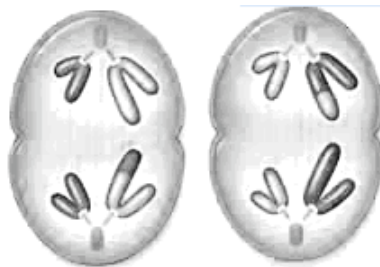
Event	Mitosis Only	Meiosis Only	Both
Two cell divisions			
Centrioles appear			
Chromosomes pair up			
Spindle fibers form			
Cytokinesis			
Four daughter cells			

# Phases of Meiosis

Name of Phase	Description
1.	Homologous chromosomes pair up and form tetrad
2.	Spindle fibers move homologous chromosomes to opposite sides
3.	Nuclear membrane reforms, cytoplasm divides, 4 daughter cells formed
4.	Chromosomes line up along equator, not in homologous pairs
5.	Crossing-over occurs
6.	Chromatids separate
7.	Homologs line up alone equator
8.	Cytoplasm divides, 2 daughter cells are formed



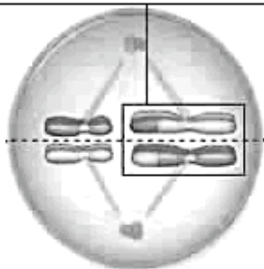
1.



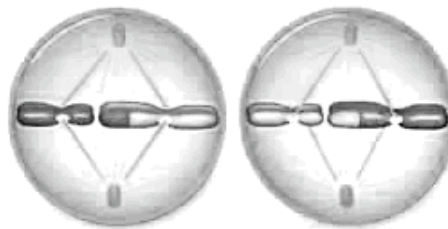
2.



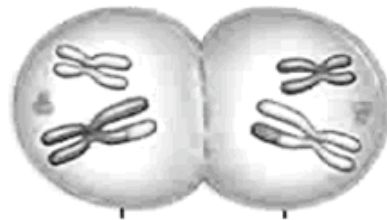
3.



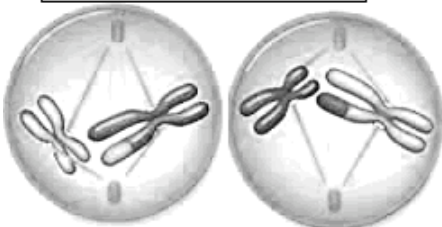
4.



5.



6.



7.



8.