

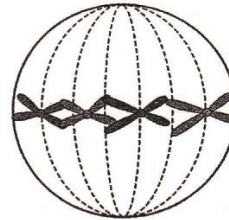
MITOSIS: Cut out the diagrams of mitosis and paste them in correct order. Draw an arrow from one stage to the next. Cut out the descriptions of mitosis and paste them below the correct diagrams. Write the name of the stage above each diagram.



Chromosomes are doubled but attached at a point called the centromere.



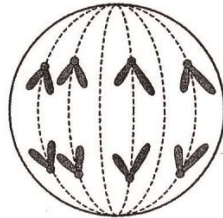
Chromosomes line up along the 'equator' of the cell.



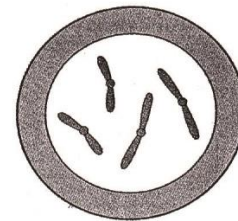
Two pairs of chromosomes are visible.



Membranes form to produce two daughter cells.



Chromosomes separate and move to the ends of the cell.



MEIOSIS: Cut out the diagrams of meiosis and paste them in correct order. Draw an arrow from one stage to the next. Cut out the descriptions of meiosis and paste them below the correct diagrams. Write the name of the stage above each diagram.

Chromosomes line up along the 'equator' of each cell.

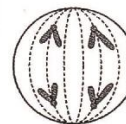
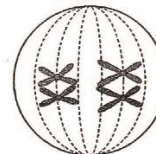


One of each pair of chromosomes moves to the ends of the cell.

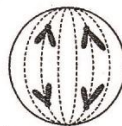
Homologous chromosomes line up along the 'equator' of the cell.



Chromosomes are doubled but attached at a point called the centromere.



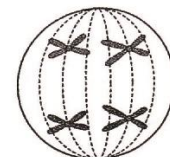
Two pairs of chromosomes are visible.



Membranes form to produce four daughter cells.



Chromosomes separate and move to the ends of each cell.



SBI3U: QUESTIONS FOR MITOSIS + MEIOSIS CUT-AND-PASTE

MITOSIS

1. Identify 4 parts of the body in which mitosis occurs:

2. How many daughter cells are produced by one parent cell? _____
3. How similar are daughter cells to each other and to the original parent cell?

4. If a parent cell begins with 46 chromosomes, how many chromosomes will there be in a daughter cell? _____
5. Are the daughter cells produced haploid or diploid? _____
6. In which stage do chromosomes line up along the equator of the cell?

7. In which stage are the chromosomes pulled apart? _____
8. In which stage do the chromosomes first APPEAR to be doubled or replicated? _____
9. What term is given to each chromosome in a doubled or replicated pair?

10. What structures pull the chromosomes apart? _____
11. What part of the cell produces the structures in #9? _____
12. What occurs during Telophase? _____
13. What is the purpose of mitosis in a(n):
 - a) multicellular organism? _____
 - b) unicellular organism? _____

MEIOSIS

1. Where in the body does meiosis occur in a human:
Male? _____ Female? _____
2. What kind of cells are produced by meiosis in a human:
Male? _____ Female? _____. In general, these sex cells are called _____
3. How many cells are produced by one parent cell? _____
4. Are daughter cells produced by meiosis identical to each other and to the original parent cell? _____
5. If a parent cell begins with 46 chromosomes, how many chromosomes will there be in a daughter cell? _____
6. Is meiosis needed for asexual or sexual reproduction? _____
7. When chromosomes are doubled, they remain attached. What structure holds them together? _____
8. When a human sperm and egg unite to produce a fertilized egg, how many chromosomes does the fertilized egg have? _____
9. Are daughter cells haploid or diploid? _____
10. Define the term homologous pair: _____