

Cell Division Study Guide

- List 2 reasons why cells divide instead of just getting bigger?
 - skip
 - skip
- What are eukaryotes and what reason(s) do they have for cell division?
Eukaryotes: **have membrane bound nucleus, Animals, Plants, Protists, Fungi**
3 reasons for division: **growth, repair, replacing old cells, asexual reproduction**
- What are some examples of eukaryotic cells in humans that go through mitosis? List some examples of these cells.
Skin cells, bone cells, stomach cells
- When eukaryotic cells divide how do chromosome numbers compare between the parent cell and the daughter cell?
Same
If parent cell has 50 chromosomes, daughter cell will have 50 chromosomes
- What are the 3 major stages of cell the cell cycle? What is the major purpose of each stage?
 - _____ : **interphase**
 - _____ : **mitosis**
 - _____ : **cytokinesis**

Of the above three stages listed, which 2 make up the M phase(actual cell division)? mitosis cytokinesis

6. List the 3 main stages of the cell cycle and the subphases that make each of them up.

1. **Interphase**

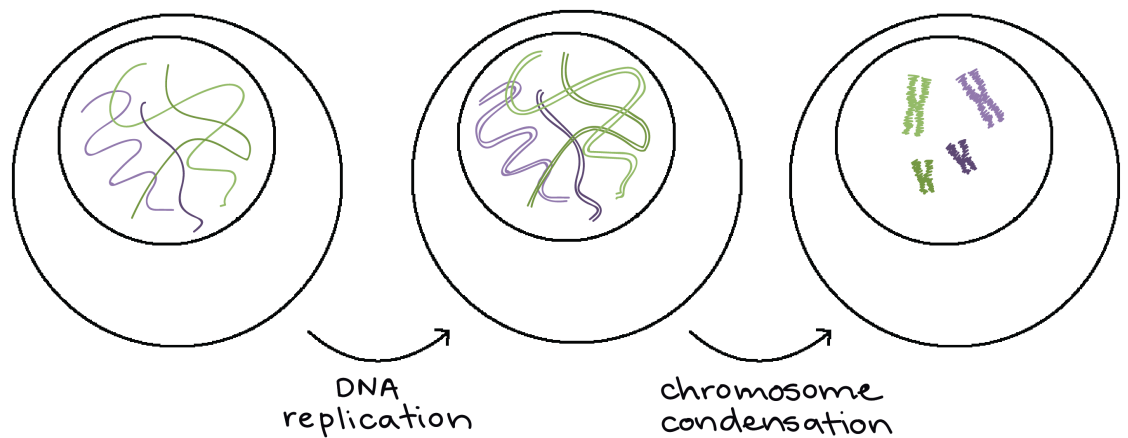
G1
S
G2

2. **Mitosis**

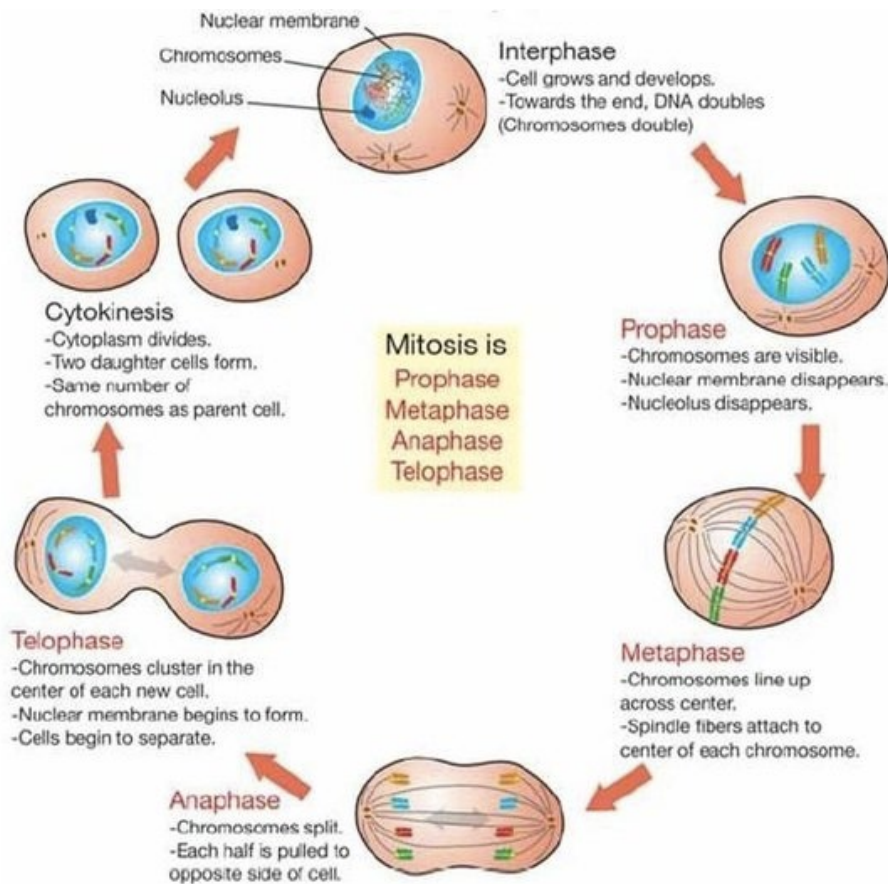
Prophase
Metaphase
Anaphase
Telophase

3. **Cytokinesis**

7. Draw and describe how DNA changes form before and after cell division.



8. Draw what the cell looks like in each phase below. **Describe what happens** in each stage below the drawings.



9. What are the major differences between plant cell division and animal cell division.

Animal cells: cleavage furrow forms
Plant cells: cell wall forms from cell plate and vesicles

- 10- 14. List and define the levels of organization starting at the simplest level to most complex.

10. cell
11. tissue
12. organ
13. organ system
14. organism

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