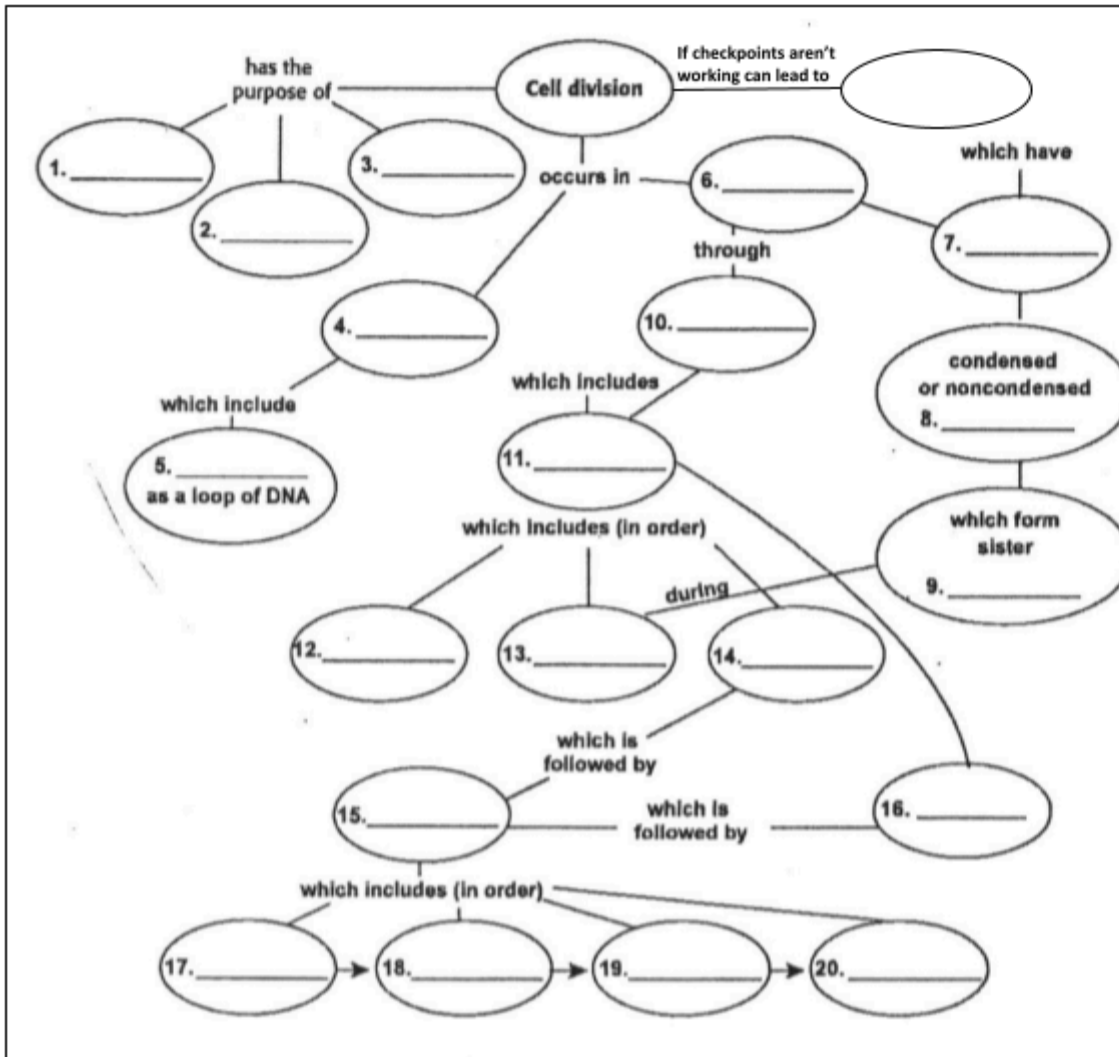


Cell Cycle & Cancer Test Review Sheet

NAME:

Date:

Using the terms and phrases provided below, complete the concept map showing the principles of cell division



- cancer
- anaphase
- Cell cycle
- chromatids
- a chromosome
- cytokinesis
- eukaryotes
- G1 phase
- G2 phase
- growth
- interphase
- metaphase
- mitosis
- nucleosomes
- prokaryotes
- prophase
- replacement
- S phase
- telophase
- wound repair

Mitosis Review Questions

- 1) What are three reasons why cells divide?

- 2) When does chromatin become a chromosome?

- 3) Which organelle plays a vital role during cell division? _____

- 4) The parent cell contains _____ chromosomes and the daughter cells contain _____ chromosome.

- 5) What are the four phases of mitosis in order?

- 6) During which phase of the cell cycle is DNA duplicated? _____

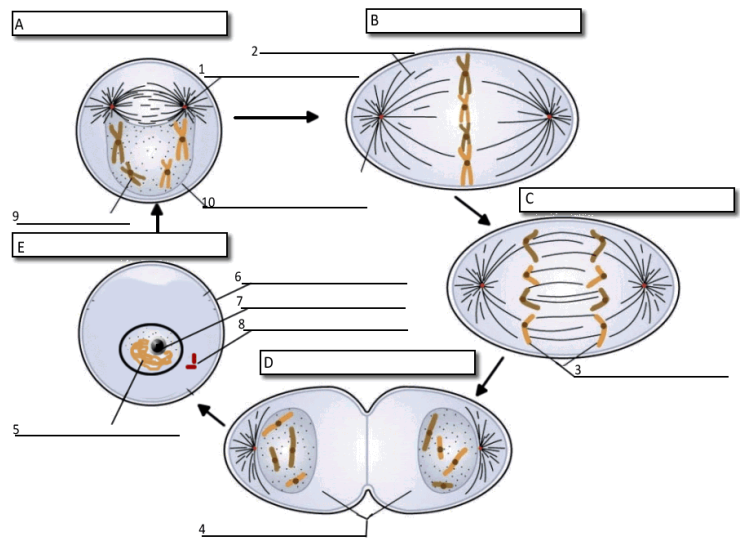
- 7) Why is it important that a cell's DNA is duplicated before cell division?

- 8) Which phase of the cell cycle does the cell spend the longest time?

- 9) What is the role of spindle fibers during cell division?

- 10) Complete the illustration to the right.

- A.
- B.
- C.
- D.
- E.
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.



11) Write a brief explanation of each phase

| | Animal | Plant |
|---------------------------|---------------|--------------|
| <u>Interphase</u> | | |
| <u>Prophase</u> | | |
| <u>Metaphase</u> | | |
| <u>Anaphase</u> | | |
| <u>Telophase</u> | | |
| <u>Cytokinesis</u> | | |

11) Define the following:

Metastasis

Apoptosis

Stem Cell

Differentiation

G₀

12) What is cancer?

13) What happens in the cell that leads to cancer?

14) List three ways that Cancer can be prevented.

Matching: match the term to the description

| A. Prophase | B. Interphase | C. Telophase | D. Cytokinesis | E. Metaphase | F. Anaphase |
|-------------|---------------|--------------|----------------|--------------|-------------|
|-------------|---------------|--------------|----------------|--------------|-------------|

| | |
|--|---|
| ___ 1. The sister chromatids are moving apart. | ___ 10. Chromatids line up along the equator. |
| ___ 2. The nucleolus begins to fade from view. | ___ 11. The spindle is formed. |
| ___ 3. A new nuclear membrane is forming around the chromosomes. | ___ 12. Chromosomes are not visible. |
| ___ 4. The cytoplasm of the cell is being divided. | ___ 13. Cytokinesis is completed. |
| ___ 5. The chromosomes become invisible. | ___ 14. The cell plate is completed. |
| ___ 6. The chromosomes are located at the equator of the cell. | ___ 15. Chromosomes are replicated. |
| ___ 7. The nuclear membrane begins to fade from view. | ___ 16. The reverse of prophase. |
| ___ 8. The division (cleavage) furrow appears. | ___ 17. The organization phase |
| ___ 9. The chromosomes are moving towards the poles of the cell. | |

The diagram below shows six cells in various phases of the cell cycle. Note the cells are not arranged in the order in which the cell cycle occurs. Use the diagram to arrange the cells in the appropriate order

