

THE CELL CYCLE WORKSHEET

Name: Jalen Powell

Matching: match the term to the description

A. Prophase

B. Interphase

C. Telophase

D. Metaphase

E. Anaphase

E 1. The sister chromatids are moving apart.

B 2. The nucleolus begins to fade from view.

C 3. A new nuclear membrane is forming around the chromosomes.

C 4. The cytoplasm of the cell is being divided.

C 5. The chromosomes become invisible.

D 6. The chromosomes are located at the equator of the cell.

A 7. The nuclear membrane begins to fade from view.

C 8. The division (cleavage) furrow appears.

E 9. The chromosomes are moving towards the poles of the cell.

D 10. Chromatids line up along the equator.

A 11. The spindle is formed.

B 12. Chromosomes are not visible.

B 13. Cytokinesis is completed (as next cycle begins).

C 14. The cell plate is completed.

B 15. Chromosomes are replicated.

C 16. The reverse of prophase.

B 17. The organization phase

Fill in the blank: Some will be used more than once.

A. Prophase

D. Metaphase

G. Chromatid

J. Spindle fiber

B. Interphase

E. Anaphase

H. Cytokinesis

K. Cell plate

C. Telophase

F. Centromere

I. Mitosis

B 18. What phase are daughter cells in as a result of mitosis?

E 19. During what phase of mitosis do centromeres divide and the chromosomes move toward their respective poles?

A 20. What is the phase where chromatin condenses to form chromosomes?

F 21. What is the name of the structure that connects the two chromatids?

G 22. In a chromosome pair connected by a centromere, what is each individual chromosome called?

I, H 23. What are the two parts of cell division?

J 24. What structure forms in prophase along which the chromosomes move?

D 25. Which phase of mitosis is the last phase that chromatids are together?

B 26. Which phase of the cell cycle is characterized by a non-dividing cell?

J 27. What structure is produced when protein fibers radiate from centrioles?

K 28. What forms across the center of a cell near the end of telophase?

B

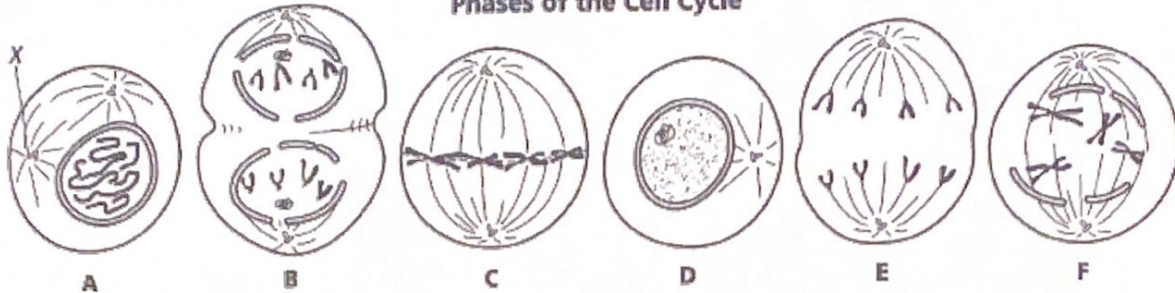
29. The period of cell growth and development between mitotic divisions?

H

30. What is the phase where cytokinesis occurs?

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 answer questions 1-7.

Phases of the Cell Cycle

Prophase

1.

cycle. What phase is it?

Cells A & F show an early and a late stage of the same phase of the cell cycle. What phase is it?

C

2.

Which cell is in metaphase?

A

3.

Which cell is in the first phase of M phase (mitosis)?

Centriole

4.

In cell A, what structure is labeled X?

DAFCBE

5.

List the diagrams in order from first to last in the cell cycle.

animal

6.

Are the cells depicted plant or animal cells?

a. Explain your answer. Cells don't have cell wall, round, Pinching

b. If it were the other type of cell what would be different in the diagrams?

rectangular shapeInterphase

7.

What is the longest phase of the cell cycle?

8. Why is mitosis important? Duplicates the genetic material for daughter cells

9. Predict what would happen if an individual had faulty spindle fibers.

The daughter cells would end up with the wrong amount of chromosomes

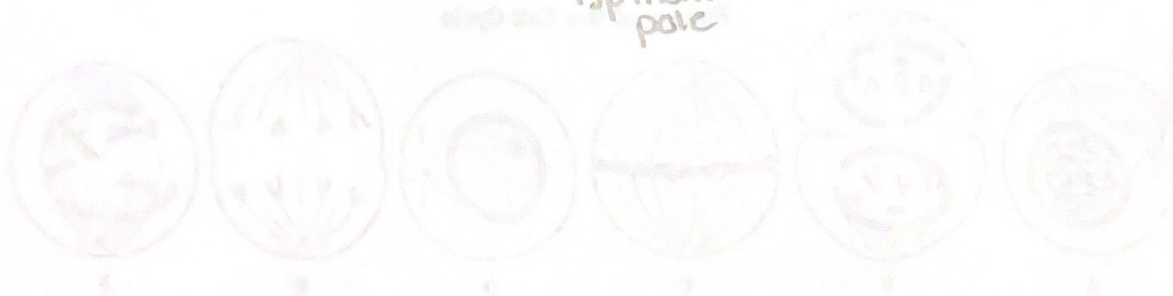
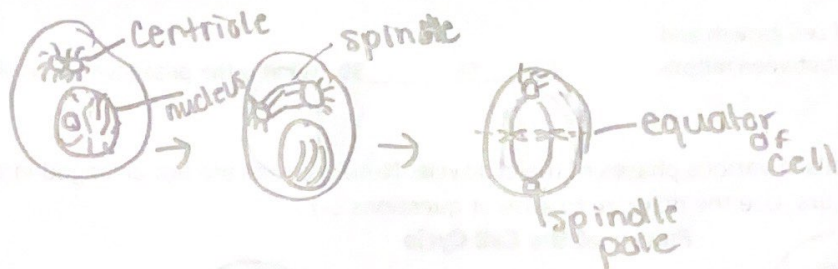
10. Predict what would happen if cytokinesis was skipped.

Cells would contain too many chromosomes and the cell wouldn't function properly.

11. What is the difference between cell plate and cleavage furrow?

The cell plate is the membrane around a plant cell. The cleavage furrow is the splitting of animal cells.

12. Draw a cell and label the: nucleus, centrioles, spindle fibers, pole of cell, equator of cell



Cell A & B show an early and a late stage of the same phase of the cell

1 _____

2 _____

which cell is in metaphase?

3 _____

which cell is in the first phase of M phase (metaphase)?

4 _____

in cell A, what structure is labeled X?

5 _____

but the diagram is ordered from first to last in the cell cycle.

6 _____

Are the cells depicted plant or animal cells?

7 _____

2. Explain your answer. (Using your knowledge of the cell cycle, identify the structures labeled X and Y, and explain why they are important.)

8 _____

3. If it were the other type of cell, what would be different in the diagram?

9 _____

What is the longest phase of the cell cycle?

10 _____

11. Why is mitosis important?

11 _____

12. In what way is mitosis different from meiosis?

12 _____

13. What is the difference between a plant cell and an animal cell?

13 _____

14. What is the difference between a plant cell and an animal cell?

14 _____

15. What is the difference between a plant cell and an animal cell?

15 _____

16. What is the difference between a plant cell and an animal cell?

16 _____