

Name: _____

Date: _____

Period: _____

AMEBA SISTERS: THE CELL CYCLE [NOTES]

<https://youtu.be/QVCidNxJreE>

1. A multicellular organisms itself grows by making more cells—by making more cells by dividing—that's _____.
2. Mitosis and cytokinesis (splits the cytoplasm) allows for you to make _____.
3. Cancer is in part due to cells that divide _____. The cells are not regulated; they are uncontrolled.
4. Cancer cells may not be able to _____ with other healthy, they may not carry out _____, they may not securely anchor themselves like other cells do which can make them more likely to travel somewhere else.
5. Some cancer cells have the ability to _____ their own growth hormones that make blood vessels divert over to those cancer cells and supply the cancer cells with _____, which is taken away from healthy cells.
6. How do cells become cancerous?
7. What is a tumor?
8. How do doctors destroy cancer cells?
9. Chemotherapy targets cells that _____ frequently.
10. The cell cycle is often represented as a pie chart—they are either in one of the two different phases: a phase called _____ where the cells are growing, replicating their DNA, doing their cells functions—or they are in _____ which includes mitosis and the actual splitting of the cytoplasm—cytokinesis.
11. Where do cells spend most of their time?
12. From the video, what type of cells do mitosis frequently and sometimes cancer drugs target these cells too?

Name: _____ Date: _____ Period: _____

13. What is a mutation?

14. Along the cell cycle, there are _____ to check that the cell is growing well; replicating its DNA correctly; and functioning correctly.

15. G1, S, and G2 phase are all part of _____. Then we have M phases where _____ will happen.

16. Complete the chart:

| Phase | Function |
|-------|---|
| G1 | |
| | DNA is replicated |
| | the cell grows some more in preparation for mitosis |

17. What are the phases of mitosis?

18. In metaphase, the chromosomes (which are made up of DNA) are lined up in the _____ correctly— that they are all attached to the spindle correctly.

19. What happens if the cell does not meet the requirements of the checkpoint?

20. What is doing the regulating of the cycle?

21. What are the two proteins involved in positive regulation?

22. Different types of cyclin rise and fall throughout the cell cycle, and the rising and falling is based on a variety of _____ to determine when the cell should move onto the next cell cycle phase.

23. Name a protein that is a negative regulator.

24. What is a G0 (G-Zero) phase?

25. What type of cells can be found in the G0 (G-Zero) phase typically?