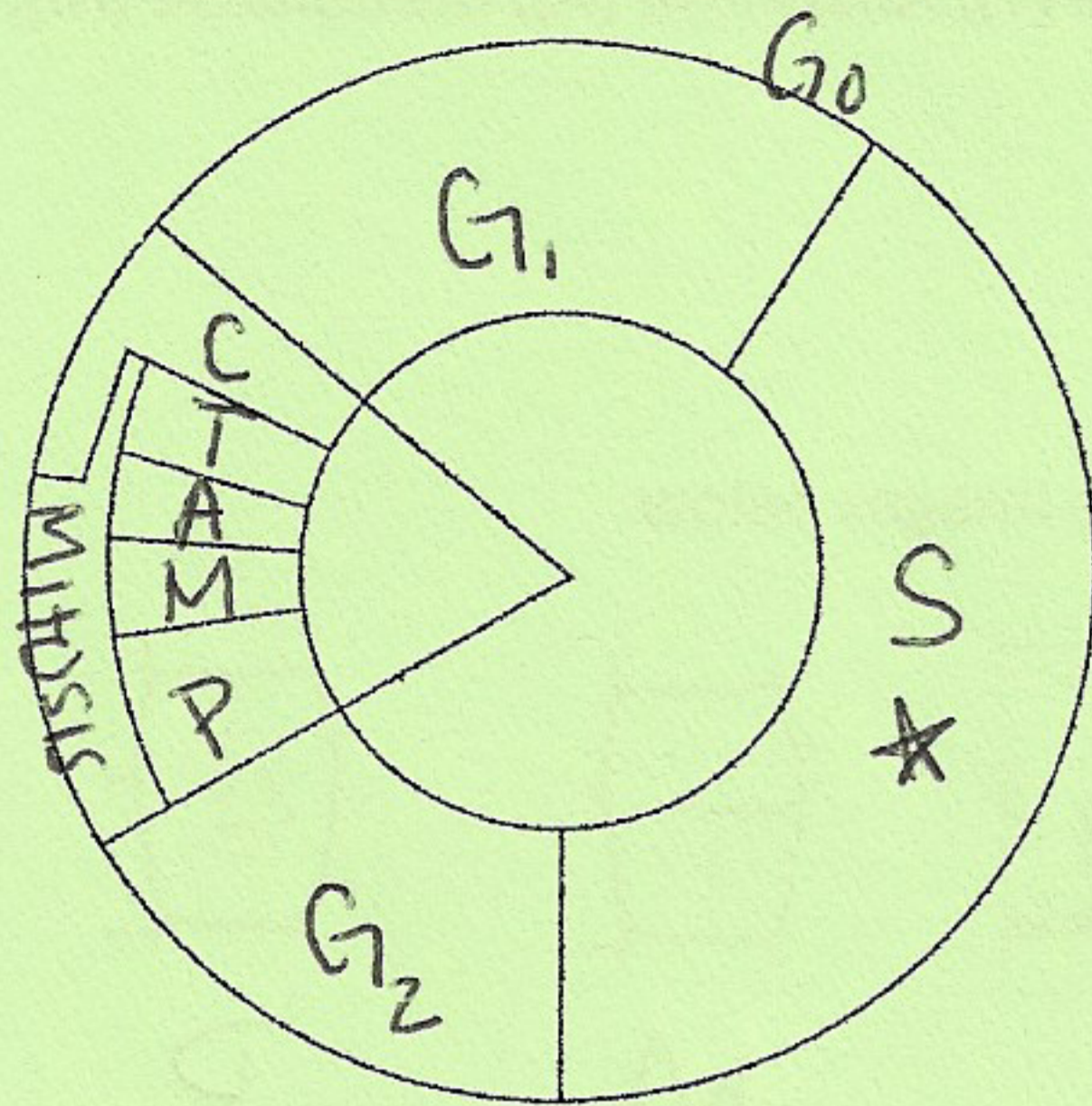


13. Explain the importance of the S phase in interphase.

DNA replication must occur before cell divides

14. Label the diagram of the cell cycle and identify where DNA synthesis occurs by drawing a star.



15. Explain how DNA synthesis is important to cell division.

So both new cells have an identical copy

16. Define somatic cell.

Body cell

17. Describe the final product of the cell cycle.

Two identical somatic cells

18. Explain why organisms need to make new cells.

growth, repair, replacement

19. What is a checkpoint's role in the cell cycle?

to prevent damaged cells from developing

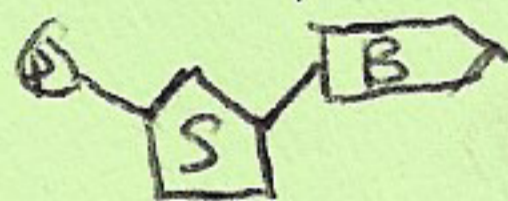
20. Describe the importance of regulating the cell cycle with checkpoints

Ensures two healthy cells are made

21. Define cancer in terms of cell division.

Uncontrolled cell growth

22. Draw a nucleotide and label its three parts.



23. Identify the location of the hydrogen bonds on DNA.

Between 2 paired bases

24. Describe the pairing rules of complementary nucleotides.

A-T      C-G

25. Define enzymes.

Proteins that speed up reactions & lower activation energy

26. What enzyme unzips DNA?

Helicase

27. What enzyme pairs nucleotides to DNA strands during DNA synthesis?

DNA polymerase