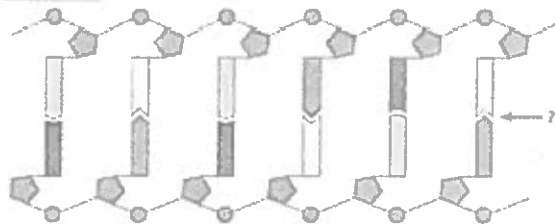


3rd 9 Weeks 3 Weeks Common Assessment Review

1 By studying this photograph, scientists gained knowledge about the —



2 A model of a DNA molecule is shown below.



The arrow indicates —

3 The fact that a strain of yeast with a certain defective gene can use the human version of the gene to repair itself is evidence that yeast and humans...

4 Characteristics such as a widow's peak or attached earlobes are determined by the genetic code. Which components of DNA are referred to as the genetic code?

5 What must occur during S phase of the cell cycle so that two daughter cells can be produced during M phase?

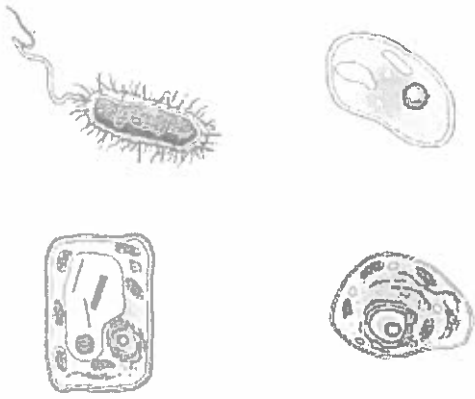
6 Telophase is a stage of a cellular process that begins after the chromosomes have moved to opposite poles of the cell. During which cellular process does telophase occur?

7 A photomicrograph of onion root tip cells during mitosis is shown below. Which phase of mitosis is occurring in the cell indicated by the arrow?



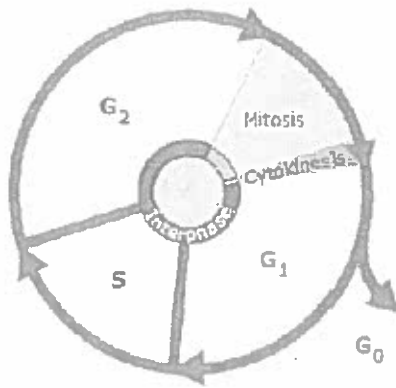
8 Cell differentiation is critical during embryonic development. The process of cell differentiation results in the production of many types of cells, including germ, somatic, and stem cells. Cell differentiation is most directly regulated by —

9 Four different types of cells are shown below. Which characteristic is shared by all four cells?

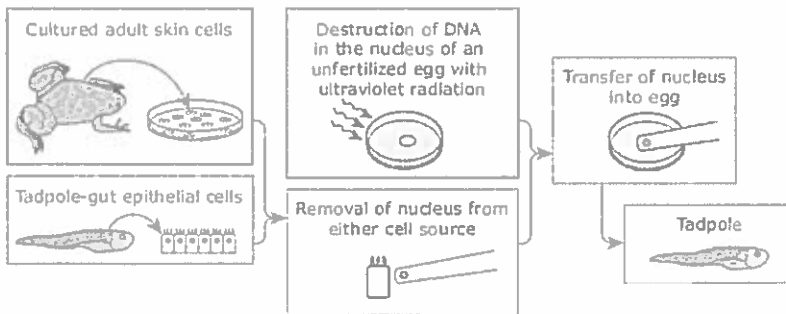


10. Atherosclerosis is a disease that obstructs blood flow and, therefore, oxygen supply to target organs. A major component of atherosclerosis is the excessive reproduction of smooth muscle cells of the blood vessels. Certain drugs may have the potential to reverse or prevent the unregulated reproduction of the diseased blood vessel cells. Which of these processes is the most likely target of these drugs?

11. The diagram below represents the cell cycle. When cells leave the cell cycle, they exit during G_1 phase and then enter G_0 phase, a resting period. Most normal cells can leave G_0 phase and reenter the cell cycle at G_1 phase before entering S phase. Cancer cells are different because they cannot enter G_0 phase and are likely to do which of the following?



12. Researchers Robert Briggs and Thomas King used ultraviolet radiation to destroy the nuclear DNA of frog eggs. Nuclei from adult skin cells and from tadpole-gut epithelial cells were cultured and then injected into eggs that had their nuclei destroyed. The results were tadpoles. Which conclusion is supported by the data from this investigation?
Briggs and King investigation



13. Checkpoints occur between the stages of the cell cycle. If a cell does not meet certain criteria at the end of a stage, it will not move to the next stage. What occurs just before the cell enters the G_2 stage of the cell cycle?

