MCj02788480000[1]

**Homework Guide**

**Cell Growth and Division Section 10.3-10.4** Due Monday 3/2/15

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_

**Tuesday:**

* Read pgs 291-293
* Complete mitosis webquest

Due: Block Day

* Vocab
* Embryo
* Differentiation
* Totipotent
* Pluripotent

**Monday:**

* Read Textbook pgs 286-290
* Vocab
* Cyclin
* Growth factor
* Apoptosis
* Cancer
* Tumor

**Friday:**

**Study for the TEST!!!!**

**Review Ideas:**

1. Review vocabulary
2. Review chapter 10 assignments.
3. Answer chapter 10 assessment questions
4. Go through daily journals- Define vocabulary and answer daily questions
5. Form a study group!!
6. Re-read chapter 10.

**Wednesday:**

* Read pgs 294-297
* Complete stem cell activity

Due: Friday

* Vocab
* Blastocyte
* Stem cell
* Multipotent

**Cell Growth and Division Test –Monday 3/2/15**

**Vocabulary Assignment: Flashcards, pictures, sentences OR crossword puzzle**

**Extra Credit: Provide detailed answers to the chapter objectives.**

**Controls on Cell Division**

*For Questions 1–6, write True if the statement is true. If the statement is false, change the underlined word or words to make the statement true.*

**1.** Cells tend to continue dividing when they come into contact with other cells.

**2.** Cell division speeds up when the healing process nears completion.

**3.** Proteins called growth factors regulate the timing of the cell cycle in eukaryotic cells.

**4.** If chromosomes have not attached to spindle fibers during metaphase, an internal regulatory protein will prevent the cell from entering anaphase.

**5.** Growth factors are external regulatory proteins that slow down the cell cycle.

**6.** Once apoptosis is triggered, a cell proceeds to self-destruct.

*Fill out the flowchart by completing each statement with the correct word or words.*

Cancer cells do not respond to signals that regulate cell .

Cancer cells form a mass of cells called a .

Cancer cells may break loose and throughout the body.

Cancer cells form tumors in other tissues by .

**Frontiers in Stem Cell Research**

*For Questions 1-3, circle the letter of the correct answer.*

**1.** Which is not a new, potential benefit of stem cell research?

**A.**growing new skin cells to repair a cut

**B.**replacing heart cells damaged by heart attacks

**C.**repairing breaks between nerve cells in spinal injuries

**D.**preventing suffering and death caused by cellular damage

**2.** What is the main reason that embryonic stem cell research is considered ethically controversial?

**A.**growing new skin cells to repair a cut

**B.**replacing heart cells damaged by heart attacks

**C.**repairing breaks between nerve cells in spinal injuries

**D.**preventing suffering and death caused by cellular damage

**3.** What is one new technology that could make stem cell research less controversial?

**A.**implanting skin cells instead of stem cells in damaged tissue

**B.**developing the ability to switch on the genes that make an adult cell pluripotent

**C.**replacing stem cells with cancer cells

**D.**using the Internet to get more people to accept stem cell research

**Review**

*For Questions 1-8, match the event with the phase of the cell cycle in which it takes place. A phase may be used more than once.*

|  |  |
| --- | --- |
| **Event**    **1.** A nuclear envelope forms around chromosomes.  **2.** The cell grows and replicates DNA.  **3.** A spindle forms.  **4.** Chromosomes line up across the center of the cell.  **5.** The genetic material condenses and chromosomes become visible.  **6.** Chromosomes move to opposite sides of the cell.  **7.** The cytoplasm divides.  **8.** Sister chromatids separate. | **Phase of the Cell Cycle**  **A.**anaphase  **B.**cytokinesis  **C.** interphase  **D.**metaphase  **E.** prophase  **F.**telophase |