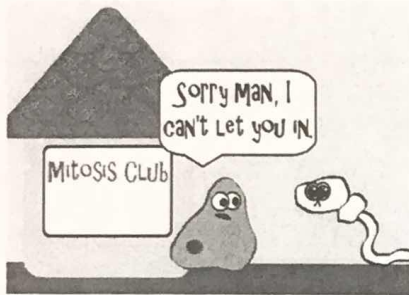
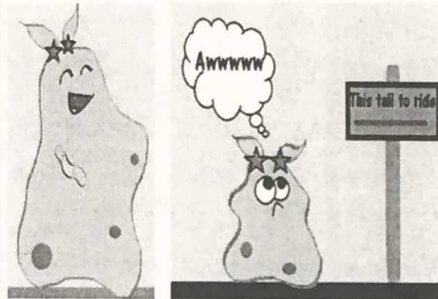


Amoeba Sisters Video Recap of Mitosis: The Amazing Cell Process That Uses Division to Multiply

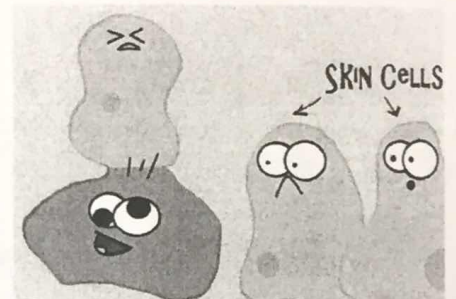
1. Mitosis is done by your body cells. This cartoon illustrates an exception. What types of cells do not undergo mitosis?



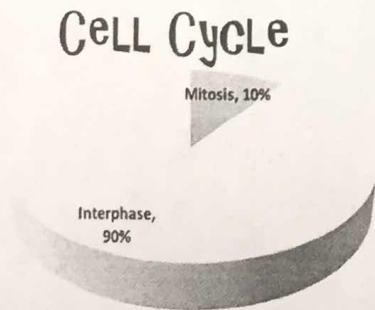
2. Describe how mitosis is important for your body.



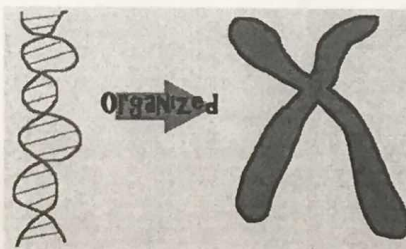
3. This illustration is trying to demonstrate something that mitosis is not. In mitosis, the cells that are created are



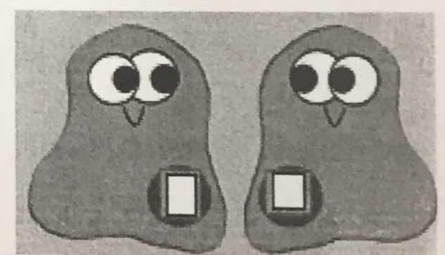
4. Mitosis is just one small part of the cell cycle! Describe what would occur if cells were in mitosis more than they were in interphase.



5. When cells are dividing, it is important to understand that they have to move **chromosomes** equally to both cells. Based on this illustration, describe what a **chromosome** is made of.

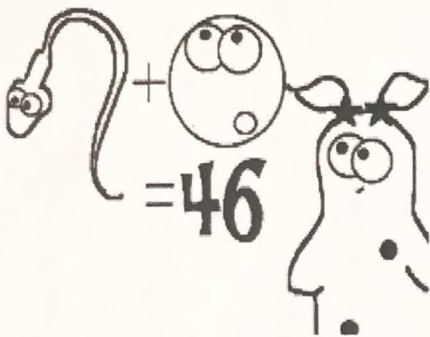


6. Mitosis starts and ends with **diploid** cells. That means they have two sets of chromosomes (both parents each contribute a set). In humans, how many chromosomes should be in each of these **diploid** cells after mitosis?

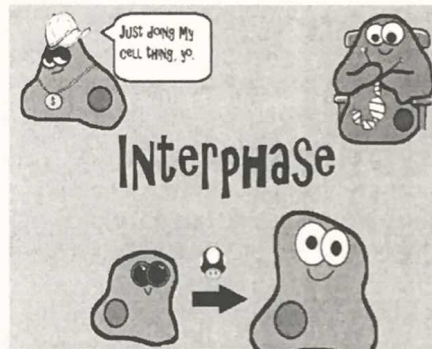


Amoeba Sisters Video Recap of Meiosis: The Great Divide

1. The purpose of meiosis is to make **gametes**, also known as sperm and egg cells. In humans, your body cells have 46 chromosomes. How many chromosomes are in a sperm or egg cell if, when they come together to form a fertilized zygote, there are 46 chromosomes? **Write the correct number of chromosomes next to the sperm and egg.**



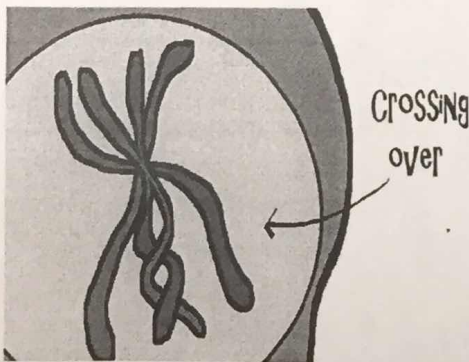
2. **Interphase** must occur once before meiosis can happen. (Same thing for mitosis). What would happen if interphase didn't occur first?



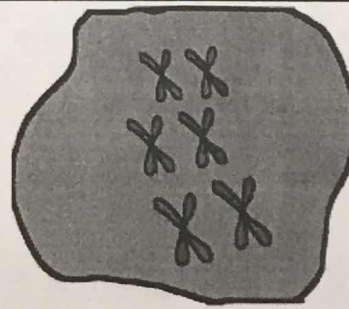
3. Remember that a cell that begins meiosis has 23 chromosomes inherited from mother (one is shown in red on the right in cartoon) and 23 chromosomes inherited from father (one is shown in blue on the left in cartoon). In the process of meiosis, chromosomes begin to match up in **homologous pairs**. How would you know if two chromosomes were **homologous**?



4. **Crossing over** is a very important event in Prophase I of meiosis! What happens during crossing over and what is the significance?



5. Meiosis does PMAT twice! That means there is a prophase 1 and a prophase 2. There is a metaphase 1 and a metaphase 2. Etc... If the cartoon below has chromosomes in the middle of the cell, how would you know whether it was in metaphase 1 or metaphase 2?



6. Meiosis does not always occur without any difficulties. Describe what occurs during **nondisjunction** and the effect on the resulting cells.

