

Genetics

Name:

Minion Mitosis

Period:

Having done some careful analysis, Dr. Nefario figured out that evil minions were not caused by his machine malfunctioning. Instead, he thinks that they were created due to problems during the process of mitosis. Dr. Nefario's investigations continue.... You can use Chapter 5, Section 2 of your book to help you analyze Dr. Nefario's work.

Dr. Nefario remembers that mitosis created two daughter cells each time the parent cell divides. How should each daughter cell compare to the parent cell?

If Dr. Nefario is watching a cell at the start of mitosis, he should see loose DNA bundling up into chromosomes in the nucleus. Then, he should see the chromosomes duplicate themselves. Why is it important that the chromosomes duplicate before the cell divides? Explain your answer:

Sometimes when DNA is copied, it is not copied correctly. When this happens, it is called a mutation. Dr. Nefario thinks that this is what created the evil minions. Why don't the good minions and the evil minions look (or act!) the same?



Bananas have 11 chromosomes. When a banana cell goes through mitosis, the daughter cells that are produced will have _____ chromosomes because ...
