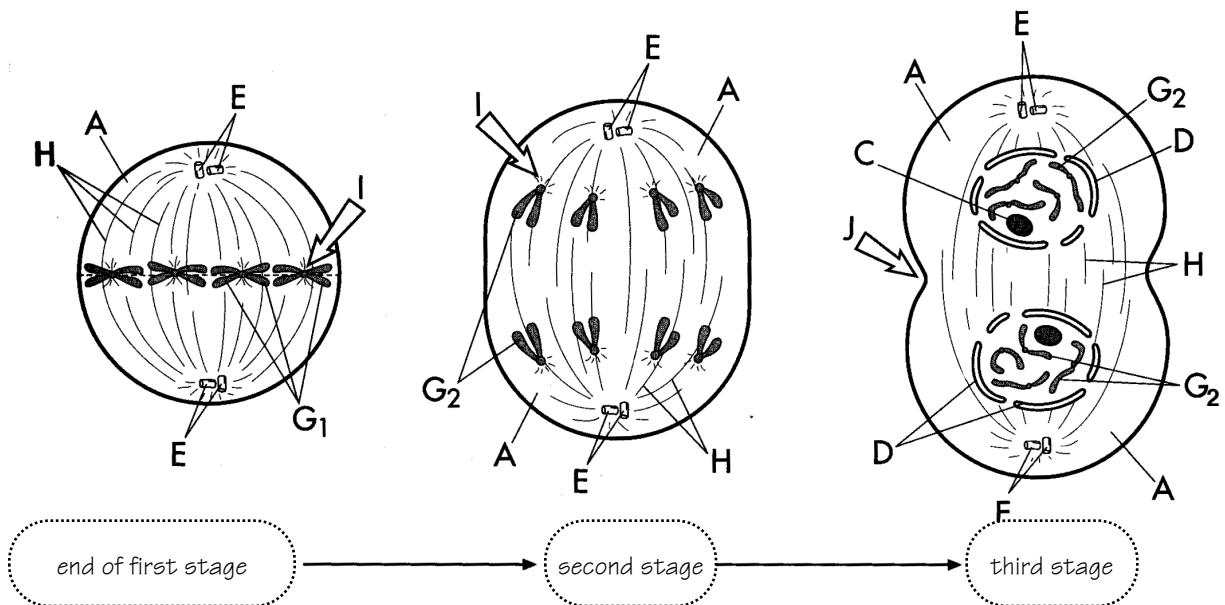
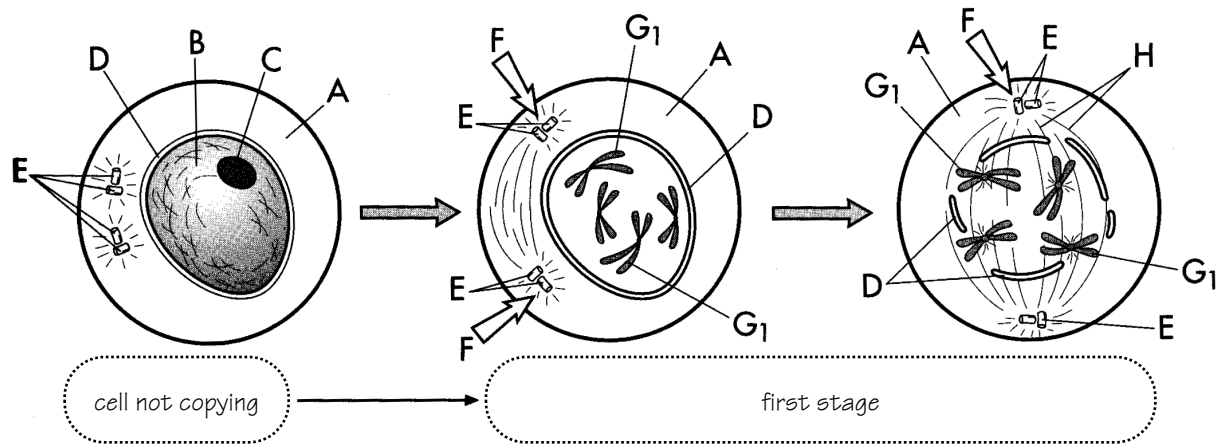


Cell Biology
Changes During Mitosis

Name: _____
 Period: _____



Mitosis		
○ Cytoplasm.....A	○ CentriolesE	○ Spindle FibersH
○ Nucleus (Chromatin).....B	○ AstersF	○ Kinetochores.....I
○ Nucleolus.....C	○ ChromatidsG ₁	○ Cleavage Furrow.....J
○ Nuclear MembraneD	○ Chromosomes.....G ₂	

diagram adapted from The Princeton Review Biology Coloring Book (1998) by I. Edward Alcamo

Cell Biology

Name:

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For this exercise, you will be observing what happens to different parts of a eukaryotic cell as it goes through mitosis. You can use Chapter 5, Section 2 of your book to help you.

1. Follow the color coding below to color these parts of each diagram. Be sure to color the key at the bottom of the diagram! Note that you will only be coloring some of the cell parts. Ignore the other ones.

cell part	letter code	color
nuclear membrane	D	orange
chromatin	B	green
chromatids	G1	green
chromosomes	G2	green

2. Surrounding the nucleus in a eukaryotic cell is the nuclear membrane. What do you notice happens to the nuclear membrane during the first stage of mitosis?

3. DNA is in different kinds of structures during mitosis that are called different things (**chromatin**, **chromatids**, **chromosomes**). Look carefully in all of the diagrams. Can you always see something containing DNA in every stage? _____

4. What happens to the structures containing DNA [G1 - the chromatids] at the end of the first stage?

5. What happened to the structures containing DNA [G2 - chromosomes] during the second stage?

6. What is happening to the shape of the cell during the second stage?

7. In the third stage, what membrane begins to form again [D]? _____

8. Look at the shape of the cell during the third stage. What is beginning to happen to the cell?

9. By the end of the third stage, how many daughter cells will be formed? _____

10. How will the hereditary material of the daughter cells compare to the parent cell?

11. Imagine that this particular cell has 4 sets of chromosomes. How many sets of chromosomes will be in each daughter cell? _____