Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**I CAN** explain and describe how animal & plant cells produce more cells.

 Period \_\_\_Date \_\_\_\_\_\_\_\_\_

**Cell Cycle NOTES**

\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ occurs in \_\_\_\_\_\_\_\_\_steps.

**1st Step**: (first stage) Chromosomes & organelles are \_\_\_\_\_\_\_\_\_\_\_ (# doubles)

\_\_\_\_\_\_\_\_\_\_\_\_ The strands of DNA & proteins appear as threadlike coils (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

 After each chromosome is duplicated, the two copies are called

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_--(\_\_\_\_\_\_\_\_\_\_\_\_chromatids).

 This ends this first stage of the cycle.

**MITOSIS** (second stage)



**2nd step** (1st phase): \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_begins \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_membrane breaks apart.

 \_\_\_\_\_\_\_\_\_\_\_\_ begin to move to opposite ends of cell (ends called poles.)

 \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ form between the poles.



 \_\_\_\_\_\_\_\_\_\_\_\_\_condense into rodlike structures.

 \_\_\_\_\_\_\_\_\_\_\_\_\_ attach at the centromere.

**3rd step** (2nd phase):\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_ line up on the equator.



 Sister

 chromatids

**4th step** (3rd phase) :\_\_\_\_\_\_\_\_\_\_ Chromatids \_\_\_\_\_\_\_\_\_\_\_\_\_and are pulled to opposite sides of the

 cell by the spindle fibers.

 Sister





 chromatids

 split

**5th step** (4th phase) :\_\_\_\_\_\_\_\_\_\_\_ The nuclear membrane forms around the 2 sets of chromosomes forming two new \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 Chromosomes unwind, the spindle fibers disappear.

 Chromosomes appear as chromatin (\_\_\_\_\_\_\_\_\_\_\_\_rather than \_\_\_\_\_\_\_.)

 \_\_\_\_\_\_\_\_\_\_\_\_ ends

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6th step** (third stage) : The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_splits in two.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ The cell membrane moves inward to create two identical cells called

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells – each with its own \_\_\_\_\_\_\_\_\_\_\_\_ with identical

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_