

MITOSIS SERIES ON MAGNETIZED BASE

CELL STRUCTURES

1. nucleolus
2. nuclear membrane
3. nuclear pore
4. extended chromatin
5. endoplasmic reticulum
6. Golgi body w/ vesicles
7. lysosomes
8. mitochondria
9. centrioles
10. condensed chromatin
(replicated chromosomes composed of two sister chromatids)
11. spindle fibers
(composed of microtubules)
12. centromere
13. cleavage furrow
with forming cell membranes

**SEE BACK SIDE OF
THIS KEY FOR LABELS!**

STAGES OF LIFE CYCLE

[**NOTE:** If the cells were not placed in the proper order, you must re-order them for this section to be useful; use figures in your book as your guide.]

INTERPHASE

extended chromatin,
single pair of centrioles

MITOSIS

Prophase

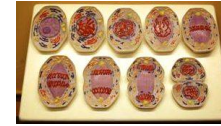
condensing chromatin,
centrioles replicated and beginning
migration to opposite poles and
formation of spindle fibers

Late Prophase / Early Metaphase

chromosomes attach to spindle fibers,
centriole pairs reach opposite poles
of cell

Late Metaphase

chromosomes align at cell's equator



Anaphase

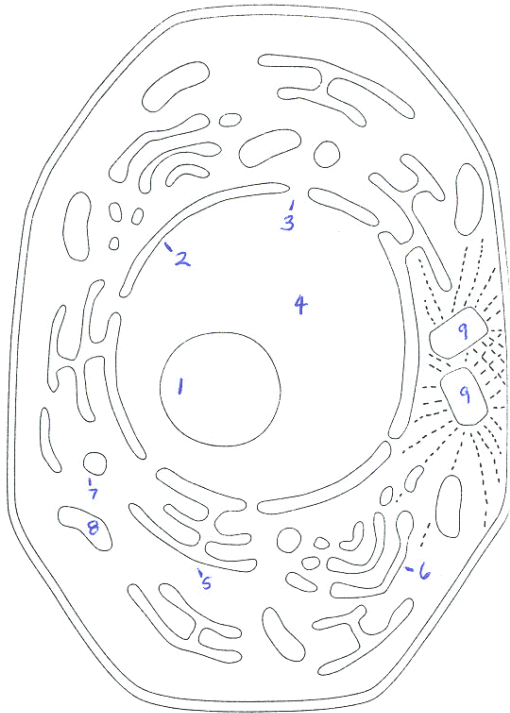
sister chromatids separate and migrate
toward opposite poles of cell, and
cleavage furrow begins to appear

Telophase

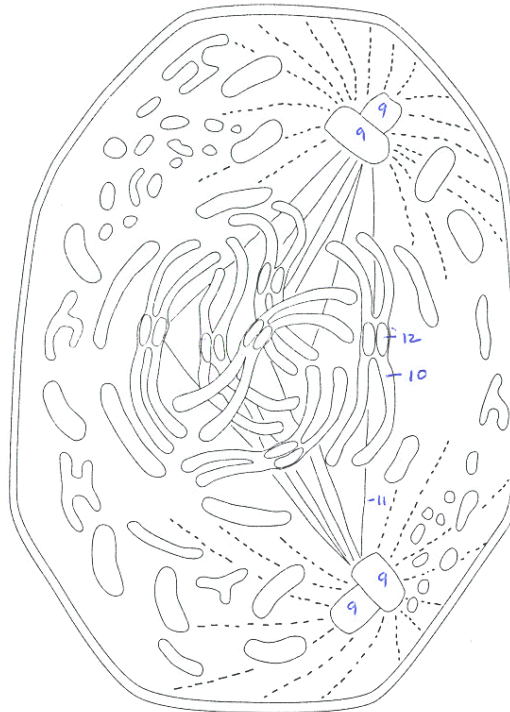
nuclear membranes begin to form
around two new daughter nuclei,
while chromosomes begin to extend
and phospholipid molecules organize
into new cell membranes along
cleavage furrow

CYTOKINESIS

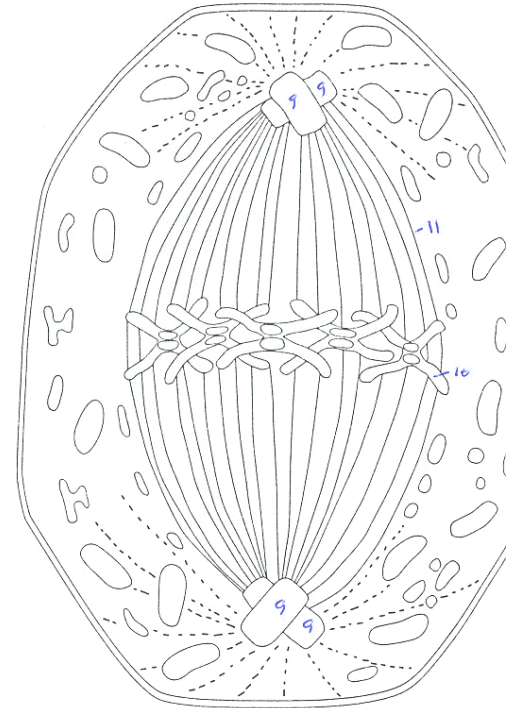
This is the process of separating the
mother cell into two daughter cells. It begins
in late anaphase or early telophase. From
here, daughter cells enter Interphase.



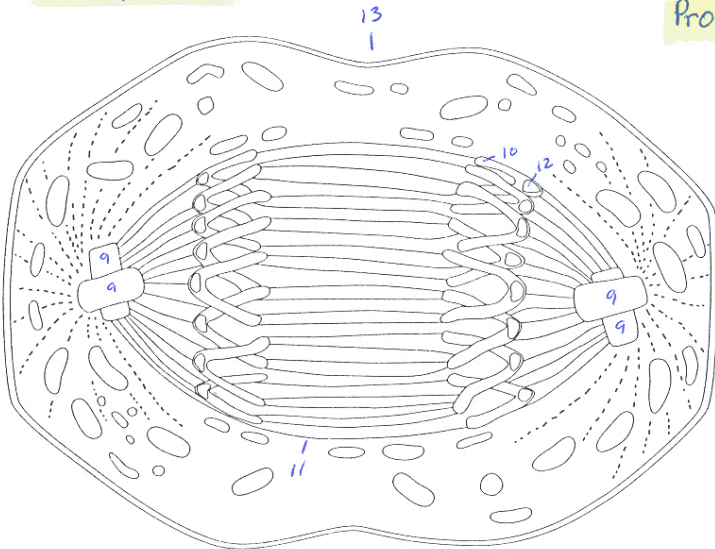
Interphase



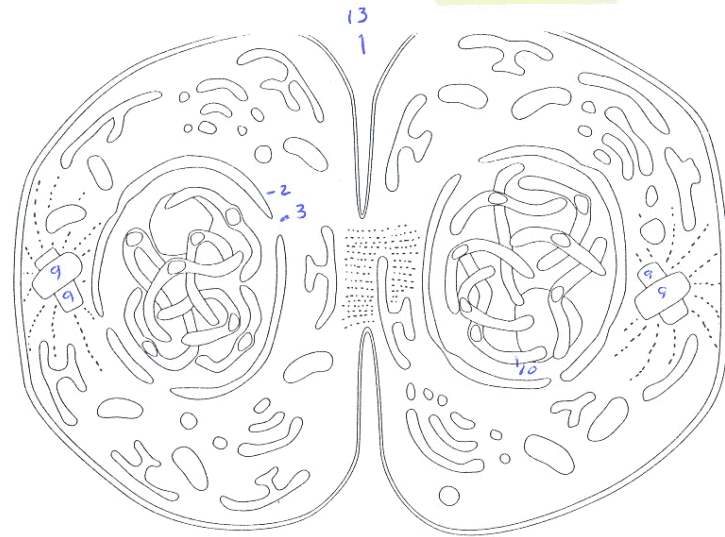
Prophase



Metaphase



Anaphase



Telophase