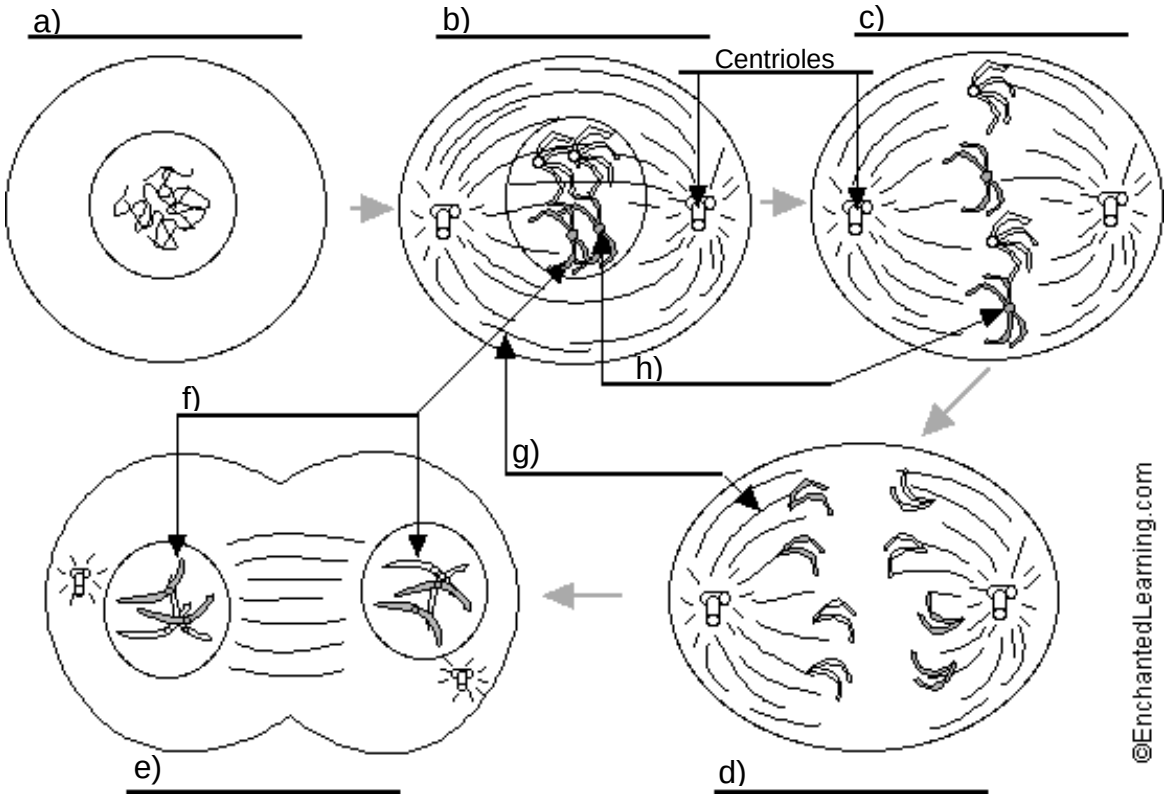
Mitosis Worksheet

Name: _____ Date: _____

1. Label the following diagram with the phase of mitosis, (a) through (e), or the type of cell structure, (f) through (h), seen during mitosis.



2. During which stage of a cell's cycle do the replicated chromosomes thicken and become visible? _____

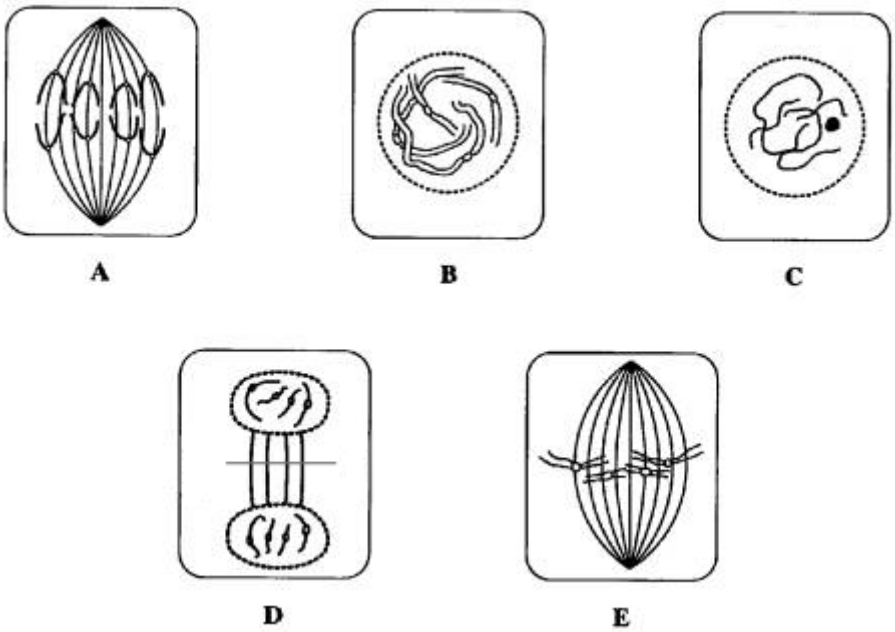
3. During which stage of a cell's cycle do the replicated chromosomes line up on the equator of the cell? _____

4. During which stage of a cell's cycle do the chromosomes replicate? _____

5. The drawing below has been made from a photograph showing a cell undergoing mitosis. Based on the drawing, in what stage of mitosis must the cell have been in?

_____

6. The drawings A-E show stages of mitosis in an plant cell.



(a) Which of the drawings A -E shows

(i) interphase _____ (**DNA** is replicated)

(ii) prophase _____ (**chromosomes** – 2 **sister chromatids** – shorten)

(iii) metaphase _____ (**sister chromatids** line up)

(iv) anaphase _____ (**sister chromatids** separate)

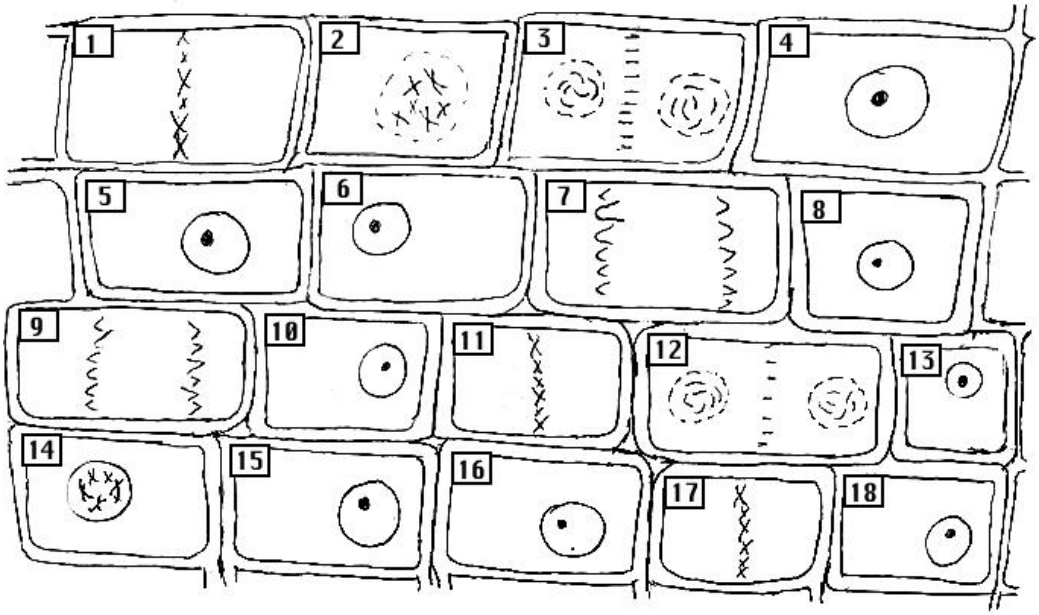
(v) telophase _____ (new nucleus forms at each end)

(vi) cytokinesis _____ (cell contents divided between 2 **daughter cells**)

(b) Give two processes which occur during interphase and which are necessary for mitosis to take place.

_____ of the cell and _____ of the DNA

7. This drawings shows various stages of mitosis in a fast growing onion root tip.



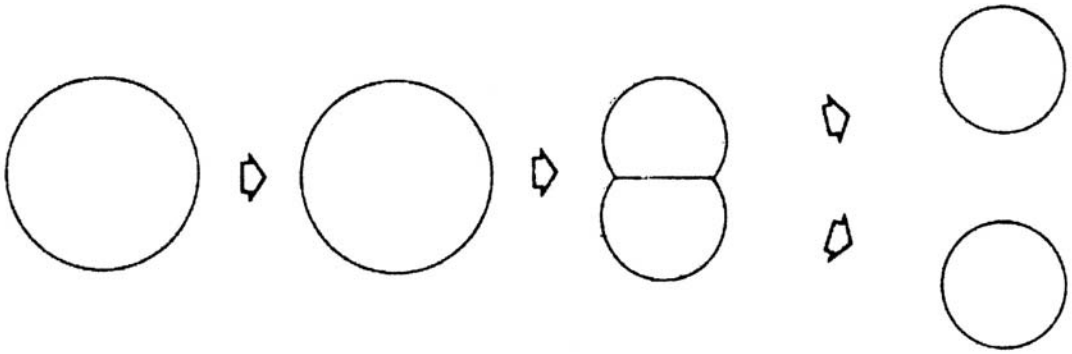
Identify the cells (by number) which are in the following stages of mitosis:

interphase _____

prophase _____

metaphase _____

anaphase _____

telophase _____

8. Using colored pens or pencils, show how 2 chromosomes are passed from parent cell to two daughter cells.