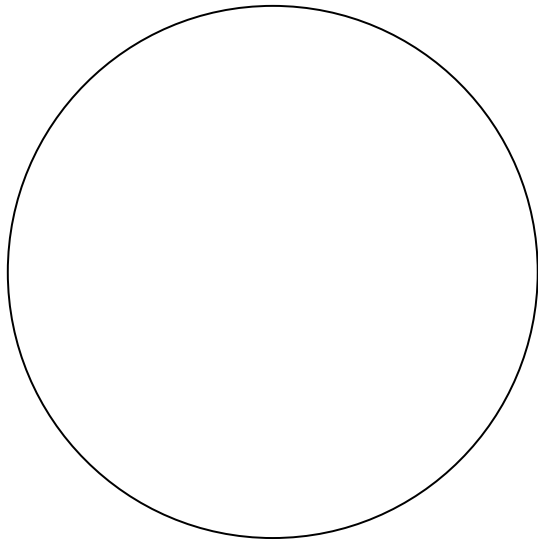


Forward:

1. Why are new plants, formed by cuttings from older plants, just like the parent plant? (front page of text folder, paragraph 2)

2. What is another name for cell division?

Slide 1 - Early Prophase:

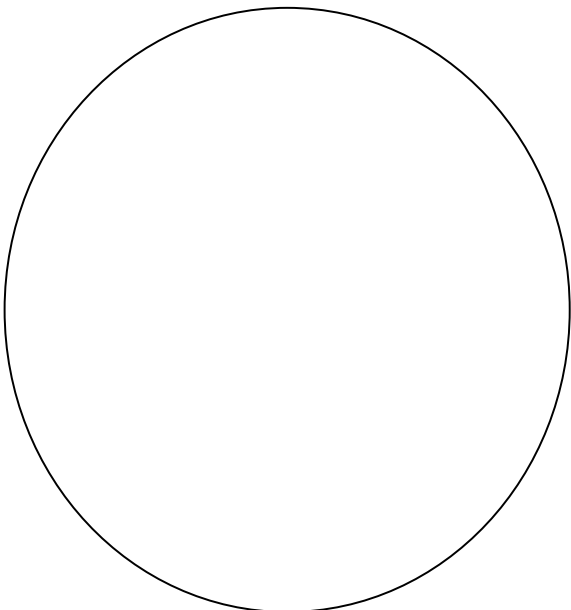


- a. Draw a cell that illustrates the beginning of mitosis.
- b. What is another term for "resting phase"? (paragraph 1)
- c. At what stage do the chromosomes duplicate themselves? (paragraph 2)
- d. At what stage does mitosis begin? (paragraph 3)

Slide 2 - Prophase:

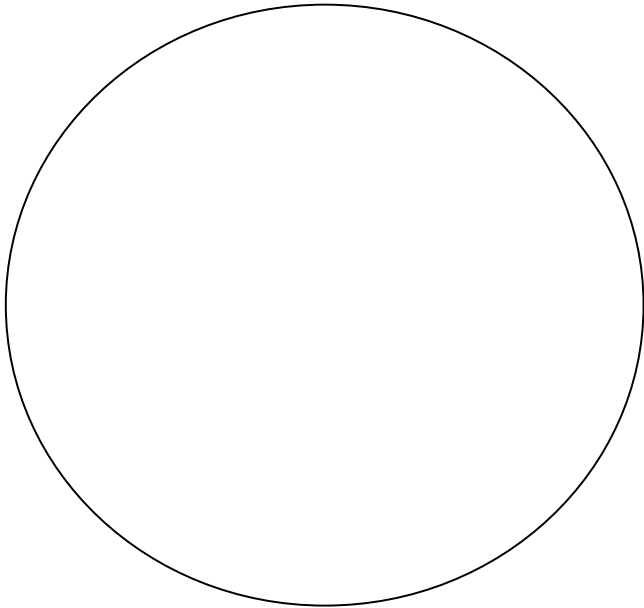
- a. What has happened to the chromosomes at this stage? (paragraph 1)
- b. Compare this slide with Slide 1. What is happening to the shape of the nucleus?

Slide 3 - Metaphase:



- a. Draw this stage of mitosis as you see it in cell C. Label the doubled chromosomes in your drawing.
- b. What is this stage called?
- c. The chromosomes line up in the middle of the cell at a place called: (paragraph 1)

Slide 4 - Early Anaphase:

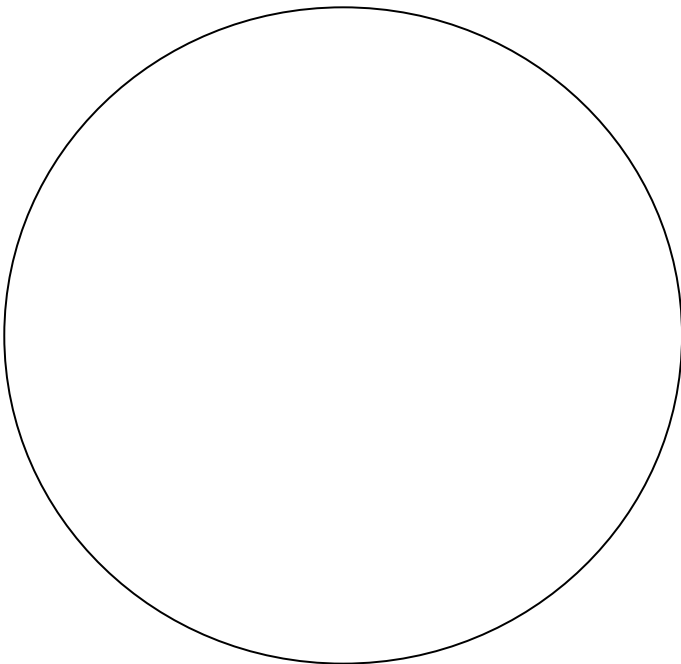


- a. What has happened to the chromosomes? (paragraph 1)
- b. Draw the cell at D. Label a pair of chromosomes that are separating.

Slide 5 - Anaphase:

- a. At what stage is cell E?
- b. At what stage is cell B?
- c. How many sets of chromosomes are visible at cell E?

Slide 6 - Late Anaphase:



- a. Draw cell F as you see it.
- b. How does stage F differ from stage E?

Slide 7 - Telophase:

- a. What will develop at the horizontal line through the middle of cell G represent? (paragraph 2)

- b. Compare the cell at the extreme upper right side of Slide 2 with cell G.

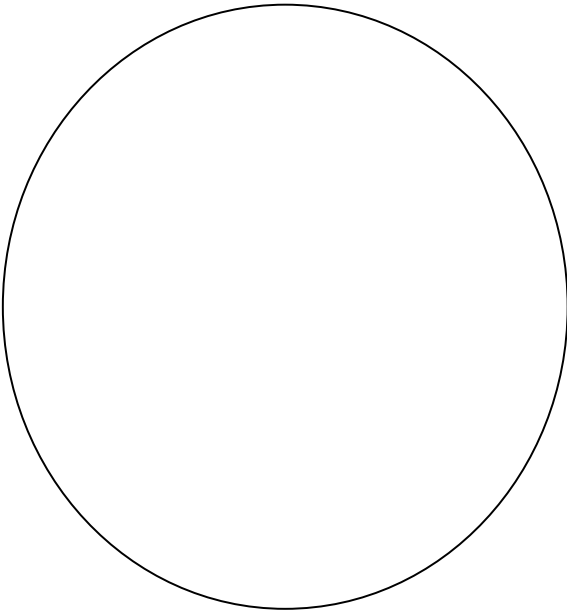
Slide 8 - Late Telophase:

- a. At what stage is cell H?

-
- b. If the original cell A contained 16 chromosomes, the number of chromosomes found in each new cell labeled H will be ____? (Choices: 8 16 32)

Microviewer Lab – Animal Mitosis

Slide 1 – The Zygote



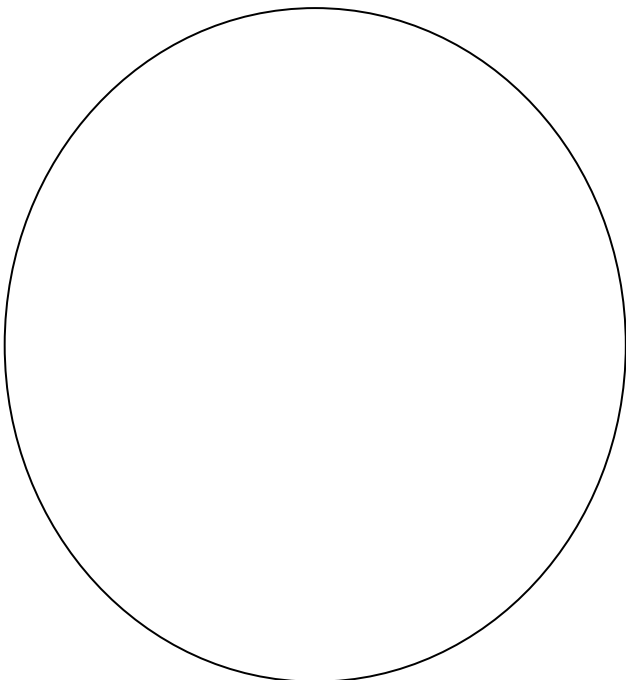
- Draw the ascaris zygote
- What is a zygote? _____
- What is chromatin?

- How many masses of chromatin are seen in this cell? _____
- Where did the masses of chromatin come from to form the zygote?
_____ and _____
- What structure will the chromatin become in mitosis? *Circle your choice.*
nucleus cytoplasm chromosome
cell

Slide 2 – Pro-Metaphase (This phase is a transition from prophase to metaphase)

- What is happening to the chromosome that makes it more visible under a microscope?
- How many chromosomes does each ascaris parent contribute? _____
- What type of chromosomes did the sperm contribute to the zygote? What type did the egg contribute?
- What happens to the chromosomes after fertilization?

Slide 3 – Metaphase



- Draw the cell
- Where have the chromosomes moved?

- What structure of the cell is at the poles? _____
- Name the structures which connects the poles to each of the chromosomes? Predict what the structures do.
- What structure is not seen in the ascaris cell but can be seen in a human cell?

Circle one. Chromosome Metaphase Chromatid Centromere

Slide 4 – Metaphase – Polar View

Explain how this slide is different from slide 3.

Slide 5 – Early Anaphase (this is a transition from metaphase to anaphase)

- How has the number of chromosomes changed in this cell? What caused this change to occur?
- (Complete the sentence) "...there is enough _____ for _____..."
- What structure is helping the chromosomes move to the poles?

Did you predict this would happen in slide 3 letter d? *Circle.* yes or no

Slide 6 – Anaphase

- Draw the cell
- What is happening to the chromosomes in this phase?
- Where are the spindle fibers pulling the chromosomes?
- What are the spindle fibers made of?

Slide 7— Telophase

- Draw the cell.
- What is happening to the cell membrane?
- What is happening to the cytoplasm?

Slide 8 – Late Telophase (Cytokinesis)

- What are the two new cells called?

- What is the number of chromosomes in a human being?

