Name: _____ Date: _____ Per: ____

Name: _____

ANIMAL MITOSIS

Introduction: In this unit we will examine the process by which an animal begins to develop from a single cell.

Read and follow the directions for the use of the Microviewer and the Microslide on the envelope attached to the text folder holding the slides. Examine each slide and study the description in the text folder. After studying each slide and the printed text, answer the question for that slide on this sheet. If you don't know the answer, go on to the next slide and question. You may find the answer as you learn more about the subject. Draw what you see in the spaces provided.

a. The process of cell development described in this set is called _____

b. The specimen studied is the egg sac of the ascaris worm. Why? _____

_____

Slide 1 – The Zygote

a. This slide shows the zygote, the fertilized egg of the ascaris. How many masses of chromatin can you see in in the cell? _____

b. Where did the masses come from? _____

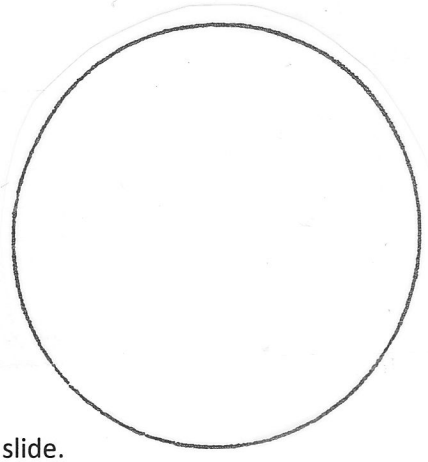
c. The amount of hereditary material supplied by each parent of the ascaris is **EQUAL / NOT EQUAL**. (Circle one)

Slide 2 – Pro-Metaphase

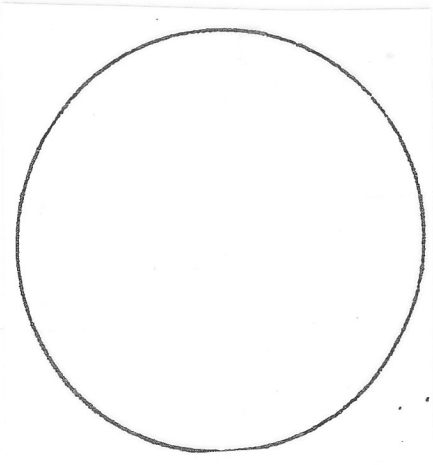
a. Draw what you see in this slide. Label the chromosomes supplied by the sperm.

b. How many total chromosomes can you see? _____

c. Each parent supplied _____ chromosomes to from the zygote.



Slide 3 – Metaphase



a. Draw what you see in this slide.

b. Label the equatorial plate, a centriole & the spindle fibers.

Slide 4 – Metaphase – Polar View

a. How does this picture differ from that in slide 3? _____

b. In this slide, the chromosomes are seen as they lie flat on the _____ plane.

Slide 5 – Early Anaphase

a. How many total chromosomes are shown in this slide? _____ (Hint: Compare with slide #3)

b. The number of chromosomes in this slide contain enough hereditary material for _____ cells.

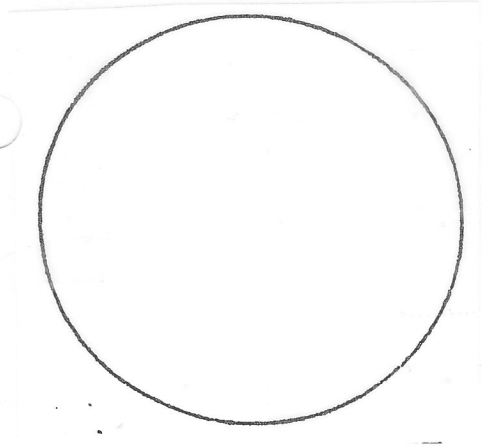
Slide 6 – Anaphase

a. The chromosomes in this slide have separated to form _____ groups. Each group contains _____ total chromosomes.

b. Why do some of the chromosomes appear to be beaded in places? _____

_____

Slide 7 – Telophase



a. Draw what you see in this slide.

b. The two groups of chromosomes are:

STILL CONNECTED / COMPLETELY APART FROM EACH OTHER. (Circle One)

c. What is happening to the cell membrane?

Slide 8 – Late Telophase

a. How many cells are seen in this slide?

b. How do these cells compare with the cell in slide 1? _____

c. How many total chromosomes are involved in human mitosis? _____