

Name: _____ Date: _____

Period: _____ Do Now# 4.3 Homework: 4.3

Aim: How do cells reproduce?

Vocabulary: (7)
 1. Chromosome 3. gene 5. gametes 7. Interphase
 2. Diploid 4. haploid 6. DNA Replication

Why do cells divide?
 1. For reproduction.
 2. For growth.
 3. To repair and replace worn out cells.

Which parts of the cell will divide? • Nucleus and cytoplasm.

The diagram on the left shows a cell with a central nucleus and surrounding cytoplasm, all enclosed by a cell membrane. The diagram on the right shows a chromosome with DNA strands, a gene, and a cell with a nucleus.

What is inside the nucleus? • Chromosomes

What is a chromosome?
 a. Microscopic, threadlike structures.
 b. Contains DNA.

How do we describe DNA?
 ➤ Carries hereditary information.
 ➤ Carries all instructions for life.

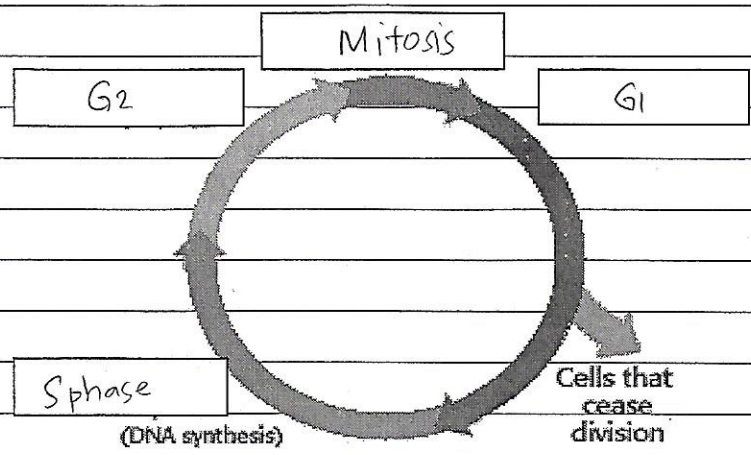
CHROMOSOME STRUCTURE

What are the parts of a chromosome?

The diagram shows two chromosome structures. The first is labeled "unduplicated" and consists of a single loop with a central point labeled "centromere". The second is labeled "duplicated" and consists of two identical loops joined at a central point labeled "centromere". One of the loops in the duplicated form is labeled "identical sister".

Questions/Main Ideas:	Notes:	
What are the 2 types of chromosome number?	1. Diploid (2N)	2. Haploid (N)
	a. Complete set of chromosomes.	a. Half set of chromosomes.
	b. Found in body cells.	b. Found in gametes.
	Examples:	Examples:
	Humans=46 Dogs=78 Tomato=24 Elephant=76	Humans=23 Dogs=39 Tomato=12 Elephant=38

What are the stages in a cell's life?



What are the stages of INTERPHASE?

1. G₁
2. S phase
3. G₂

How do we describe G₁?

- Cell is growing.
- The organelles increase in number.

What happens during S PHASE?

- DNA Replication

How do we describe G₂?

- Cell prepares to divide.
- 2 copies of DNA replicated.

Summary: 2 points

Why do gametes have half the number of chromosomes?

Cells need to divide because

Interphase is divided into