Name: Date: Period

Biology: Summarizing Mitosis and Meiosis

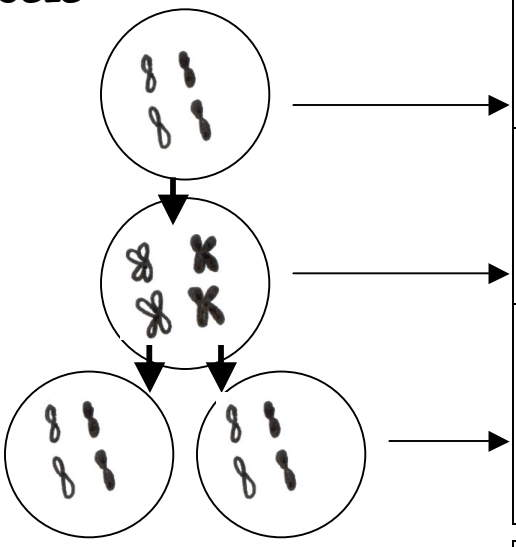
Keeping track of the number of chromosomes during mitosis and meiosis can be confusing. Mitosis takes place in non-reproductive cells to generate new cells, and in asexually reproducing organisms to produce offspring (in plants called vegetative propagation). Meiosis occurs in sexually reproducing organisms to create gametes, or eggs and sperm. This process is also referred to as gametogenesis. Eggs and sperm each contain one set (N) of chromosomes. When they fuse during fertilization, a 2N (diploid) individual will results. Most organisms, like humans, are diploid and need two sets of chromosomes to develop. To practice understanding mitosis and meiosis, keep track of the N#, chromosomes, ploidy, and calculate the corresponding number of human chromosomes.

N= haploid/ monoploid

2N= diploid

4N= tetraploid

MITOSIS



#N	# of Chromosomes	PLOID	# Human Chromosomes
2N	4	Diploid	46

MEIOSIS