Mitosis vs Meiosis

Mitosis	Mieosis
Produces body cells(Somatic cells)	Produces sex cells(*Gametes*)
Daughter cells *diploid*(2N)	Daughter cells *haploid*(N)
Two daughter cells produced	Four daughter cells produced
In metaphase chromosomes line up singley	In metaphase I chromosomes line up as *homologous pairs*(*synapsis*) The two double chromosomes are called a *tetrad* when they are lined up side-by-side. *Crossing over* occurs during the formation of the tetrad
One nuclear division	Two nuclear divisions
Produces cells for growth and repair	Produces cells for sexual reproduction
Daughter cells have two sets of chromosomes(pairs)	Daughter cells have only one member of each pair of chromosomes
Daughter cells are genetically identical to the parent cell	Daughter cells have one-half of the genes from the parent cell
Insures that all daughter cells are genetically identical	Generates genetic diversity through crossing over and ramdom seperation of homologous pairs of chromosomes