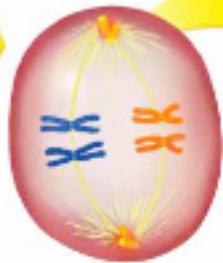


One pair of homologous chromosomes
Two chromatids

1 Before meiosis begins, the chromosomes are in a threadlike form. Each chromosome makes an exact copy of itself, forming two halves called chromatids. The chromosomes then thicken and shorten into a form that is visible under a microscope. The nuclear membrane disappears.

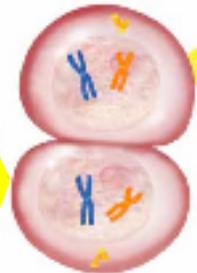


2 Each chromosome is now made up of two identical chromatids. Similar chromosomes pair with one another, and the paired homologous chromosomes line up at the equator of the cell.



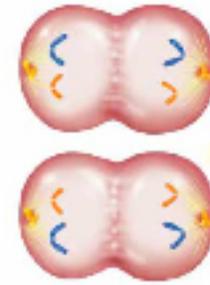
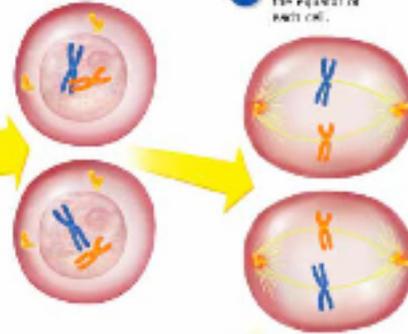
3 The chromosomes separate from their homologous partners, and they move to opposite ends of the cell.

4 The nuclear membrane reforms, and the cell divides. The paired chromatids are still joined.

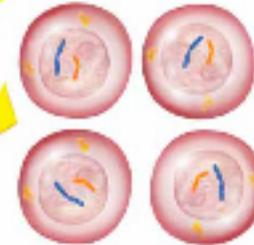


5 Each cell contains one member of each homologous chromosome pair; the chromosomes are not copied again between the two cell divisions.

6 The chromosomes then line up at the equator of each cell.



7 The chromatids pull apart and move to opposite ends of the cell. The nuclear membrane reforms around the separated chromosomes, and the cells divide.



8 The result is that four new cells have formed from the original single cell. Each new cell has half the number of chromosomes present in the original cell.