

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.

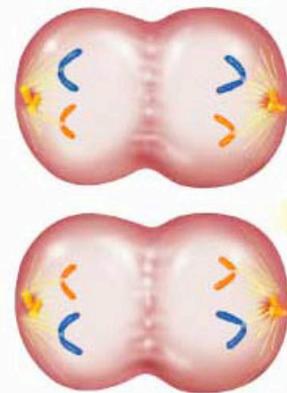
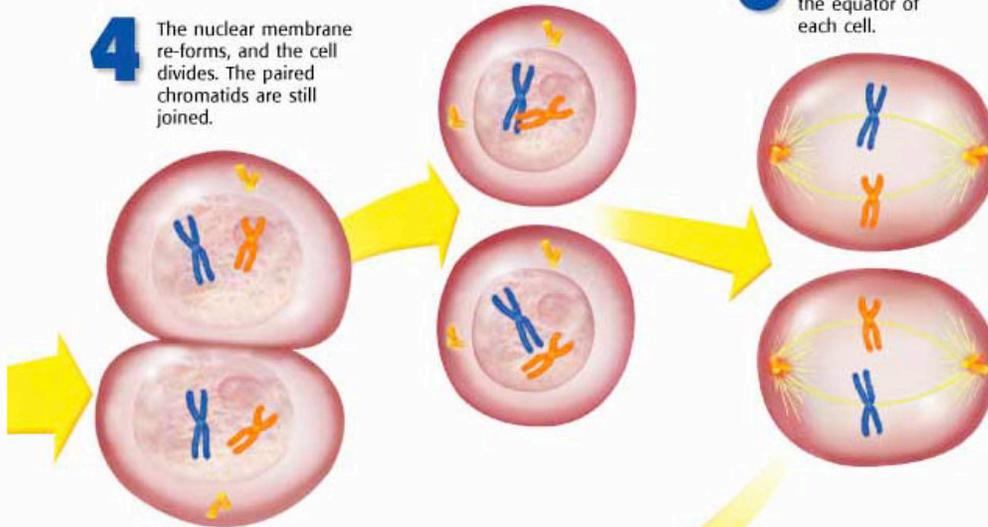
2 Each chromosome is now made up of two identical chromatids. Similar chromosomes pair with one another, and the paired homologous chromosomes line up at the equator of the cell.

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

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.

4 The nuclear membrane re-forms, and the cell divides. The paired chromatids are still joined.



7 The chromatids pull apart and move to opposite ends of the cell. The nuclear membrane forms 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.