Mitosis: A type of cell division that produces two daughter cells, each with the same number and type of chromosomes as the parent nucleus, which is normal in normal tissue development.Telophase II: The chromosomes reassemble at the poles of the cell and the cell divides by cytoplasmic division to form two daughter cells from each of the two cells from meiosis The nuclear envelope reappears, the spindle apparatus disappears, and the chromosomes condense again into chromatin.Metaphase I: Begins when the homologous chromosomes separate, the nuclear envelope forms, the nucleoli reappear, the chromosomes wrap around, the nuclear membrane begins to disintegrate, the centrosomes move apart, the spindle fibers form, and the sister chromatids line up on the equator of the cell.Metaphase II: The chromosomes line up along the metaphase plate and microtubules originating from the centrosomes at opposite poles of the cell attach to the kinetochores of each chromosome.Prophase II: In each daughter cell, a new spindle apparatus is formed, the nuclear envelope breaks, and the chromatin condenses again into chromosomes.Telophase I: The chromosomes assemble at the poles of the cell, and the cell divides by cytoplasmic division to form two daughter cells.Normally, the individual chromosomes are spread out in the cell nucleus.