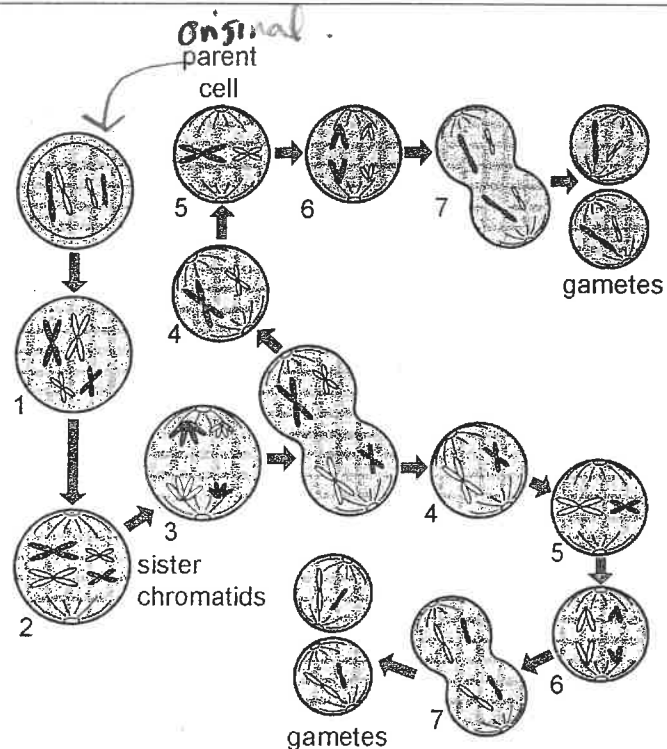


# Key Events in Meiosis

Goal • Review the steps of meiosis.

What to Do:

Use the diagram to answer the questions that follow.



- Each chromosome doubles itself, forming two identical copies, called sister chromatids.
  - How many chromosomes are in diagram 1? \_\_\_\_\_
  - How many chromatids? \_\_\_\_\_
- The doubled chromosomes come together in matching pairs in diagram 2. Where do they line up? \_\_\_\_\_
- The chromosomes separate in diagram 3. Where are they pulled? \_\_\_\_\_
  - Are the chromosomes that have been pulled all the same or are they different? \_\_\_\_\_
- The first division of meiosis has occurred, and the cell has formed two new cells (diagram 4). What are the contents of these cells? \_\_\_\_\_
- In diagram 5, the chromosomes again line up along the centre of each new cell. How does this step differ from diagram 2? \_\_\_\_\_
- In diagram 6, the sister chromatids separate and move to opposite ends of the cell. How is this stage of meiosis very similar to mitosis? \_\_\_\_\_
- The cells divide in diagram 7. How many new cells are formed by meiosis? \_\_\_\_\_
  - Compared to the parent cell, how many chromosomes does a new cell have? \_\_\_\_\_

8. a) In which diagram will crossover occur? # \_\_\_\_\_  
 b) what stage is this in meiosis? \_\_\_\_\_

## Key Events in Meiosis

1. (a) 4 chromosomes  
(b) 8 chromatids
2. Across the centre of the cell
3. (a) To opposite ends of the cell  
(b) Different
4. Each cell has one chromosome from each pair. Each chromosome is composed of sister chromatids.
5. Chromosomes are not paired.
6. Sister chromatids separate as they do in mitosis.
7. (a) 4 new cells  
(b) Half the number of chromosomes
8. a) 1  
b) prophase I