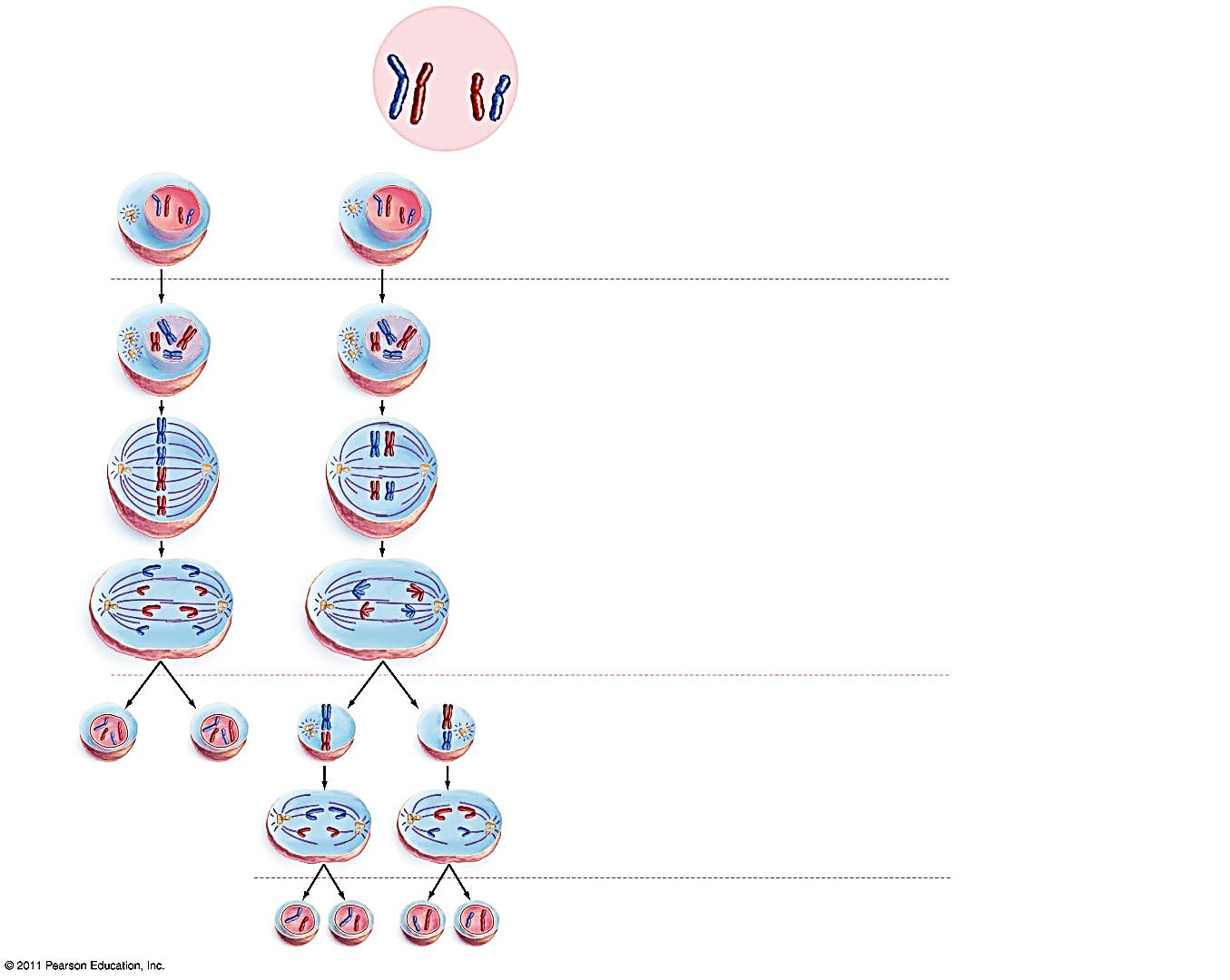
**COMPARING MITOSIS AND MEIOSIS**

1. In the figure to the right, label the column that shows meiosis and the column that shows mitosis.
2. What are some similarities between cell division by mitosis and cell division by meiosis?
3. Complete the table below to describe some important differences between mitosis and meiosis.

|  |  |  |
| --- | --- | --- |
| **CHARACTERISTIC** | **MITOSIS** | **MEIOSIS** |
| # of daughter cells |  |  |
| Type of cells produced  *(sex cells or somatic cells)* |  |  |
| Daughter cells genetically different or similar to parent cells?  *(If different, say how)* |  |  |
| # of cell divisions |  |  |

1. The circles below represent cells in **metaphase** of mitosis and **metaphase I** of Meiosis. Show how **TWO** pairs of homologous chromosomes are lined up in each cell to compare mitosis to meiosis I.

**MITOSIS MEIOSIS I**

1. Match each description below with one of the following options:
   1. **pairs of homologous chromosomes**
   2. **sister chromatids**

Mitosis separates \_\_\_\_\_ Meiosis I separates \_\_\_\_\_ Meiosis II separates \_\_\_\_\_

1. Explain why sexually reproducing organisms need to have two different types of cell division.