

This is the **Foundation Combined** version — Higher Tier and Separate-only content removed.

Meiosis is the cell division that produces gametes (sex cells). It generates genetic variation essential for evolution.

- Meiosis produces **FOUR** genetically **DIFFERENT** haploid cells from one diploid parent cell.
- Haploid: containing only one set of chromosomes (23 in humans — one from each pair).
- During fertilisation, two haploid gametes fuse → diploid zygote (46 chromosomes).
- Meiosis involves **TWO** divisions: Meiosis I separates homologous chromosome pairs; Meiosis II separates sister chromatids.

Key Terms

Meiosis	Cell division producing 4 genetically DIFFERENT haploid cells — for sexual reproduction
Haploid	Containing one set of chromosomes — 23 in human gametes
Diploid	Containing two sets of chromosomes — 46 in human body cells

■ **Exam Tip:** Meiosis vs mitosis: **MITOSIS** = 2 identical **DIPLOID** cells. **MEIOSIS** = 4 **DIFFERENT HAPLOID** cells. In an exam: if asked what type of cell division produces gametes, **ALWAYS** say meiosis.