

# 17.2 Mitosis

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

**Total: 6 marks**

**KEY WORDS** mitosis 有丝分裂 • daughter cell 子细胞 • haploid 单倍体 • diploid 二倍体  
• stem cells 干细胞

## Objective

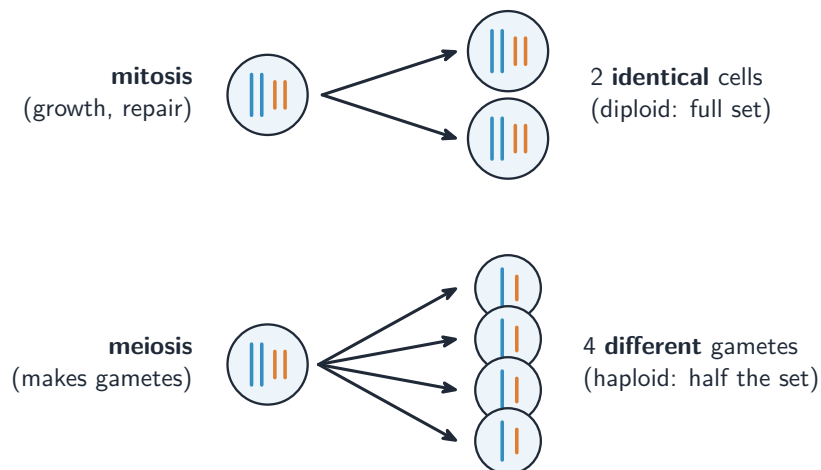
Build the skills to answer exam questions on **mitosis** 有丝分裂 — what it produces, when it is used, and **stem cells** 干细胞.

**You must be able to:**

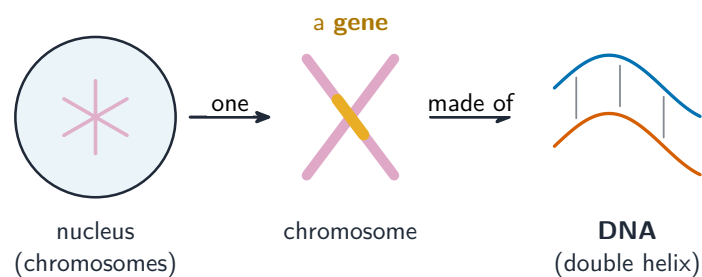
- describe mitosis (two genetically identical diploid cells)
- state where mitosis is used
- describe stem cells

## 1 Worked examples

### ■ Mitosis



*Mitosis makes two genetically identical diploid daughter cells*



*Chromosomes carry the genes copied in mitosis*

- chromosomes are copied (replication) first, so each daughter keeps the full number.
- used for **growth, repair, replacing cells and asexual reproduction**.
- **stem cells** are unspecialised cells that divide by mitosis.

## 2 Practice

2.1 State how the daughter cells of mitosis compare with the parent. [1]

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2.2 State one use of mitosis in the body. [1]

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## 3 Exam-style questions

3.1 Mitosis produces cells that are: [1]

|   |   |
|---|---|
| A | B |
| C | D |

- A** haploid and different  
**B** diploid and identical  
**C** haploid and identical  
**D** diploid and different

3.2 Mitosis is important for growth and repair.

(a) Explain why the chromosomes are copied before mitosis. [2]

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(b) State what a stem cell is. [1]

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