

Meiosis Practice

Name: *Key*
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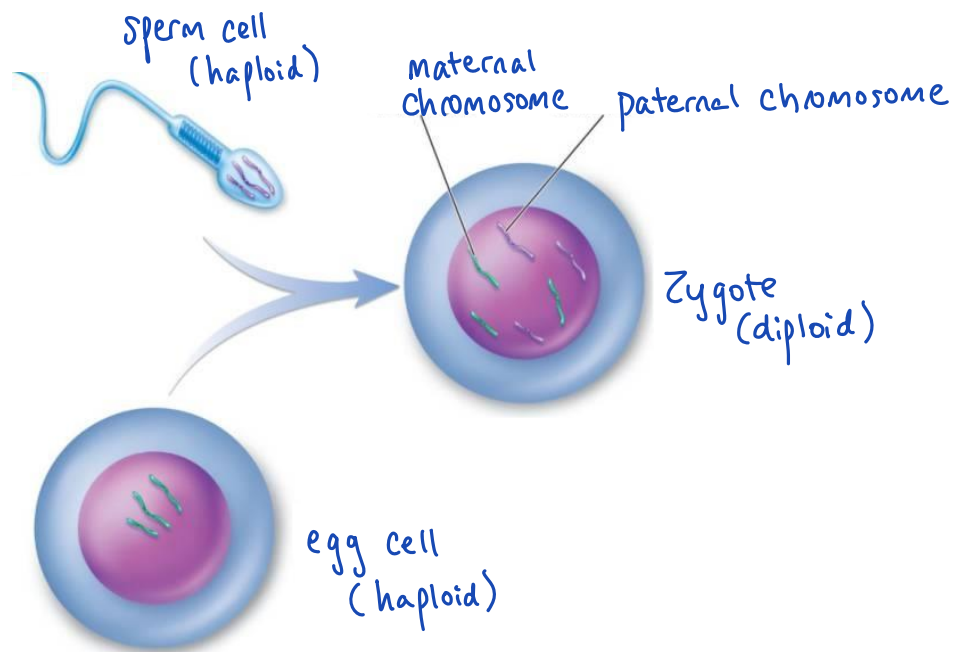
1. Determine how many chromosomes are in the gametes and body cells of the following organisms:

Organism	Number of chromosomes in the gametes	Number of chromosomes in the body cells
Dog	<i>39</i>	78
Housefly	<i>6</i>	12
Cow	30	<i>60</i>
Deer	35	<i>70</i>

2. What process must cells undergo in order to produce gametes?

*Cells undergo **meiosis** to produce gametes (sperm/egg cells)*

3. Label the following diagram with the following terms: sperm cell, egg cell, zygote, haploid, diploid, maternal chromosome, paternal chromosome



Part I!

4. Identify which stage of meiosis each of the following statements describe.

- a. Nuclear membrane starts to disappear and homologous chromosomes pair

Prophase I

- b. DNA condenses into chromosomes

Prophase I

- c. Two nuclei are formed

Telophase I

- d. Chromosomes separate and move to opposite ends of the cell

Anaphase II

- e. Homologous chromosomes line up in two lines in the middle of the cell

Metaphase I

- f. DNA exists as chromosomes but not as homologous pairs

Prophase II

5. In order for chromosomes to move, they need help from structures in the cell.

- a. Which structure helps these chromosomes move in the cell?

Spindle fibres help chromosomes move in the cell

- b. Where do these structures attach to on the chromosome?

Spindle fibres attach to the chromosome's centromere

6. What is the end result of meiosis?

The end result of meiosis is 4 different haploid gametes