

### Study Guide 6.2: Process of Meiosis

**KEY CONCEPT**

During meiosis, diploid cells undergo two cell divisions that result in haploid cells.

**VOCABULARY**

gametogenesis	egg
sperm	polar body

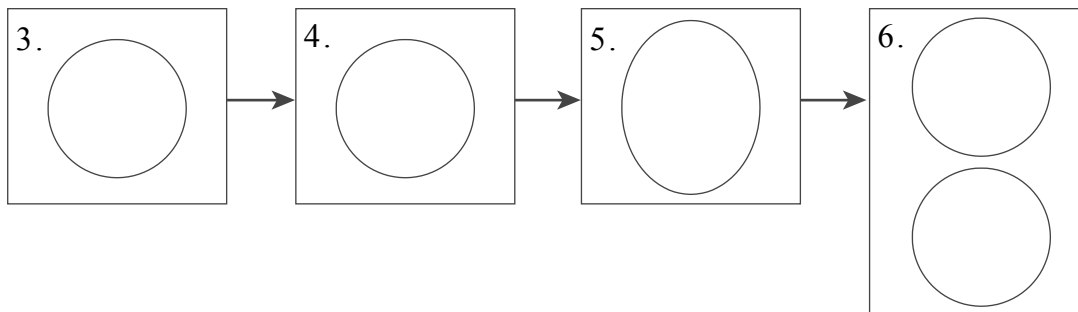
**MAIN IDEA:**

Cells go through two rounds of division in meiosis.

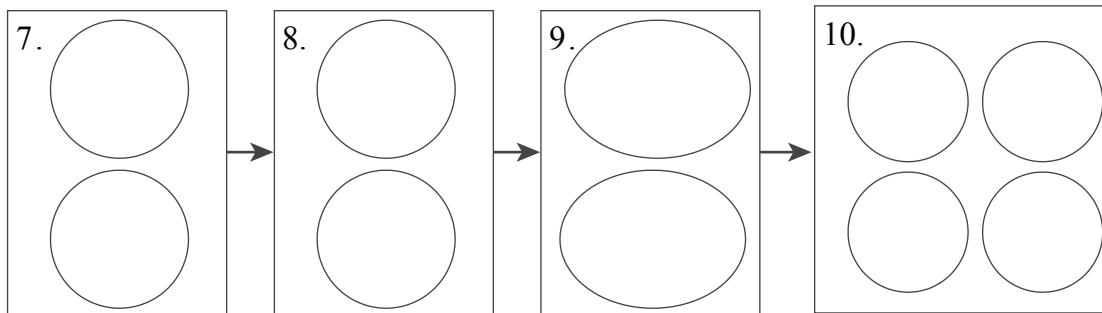
1. After a chromosome is replicated, each half is called a \_\_\_\_\_.
2. Two chromosomes that are very similar and carry the same genes are called \_\_\_\_\_.

In the space below, sketch the phases of meiosis I and II and write the name of each phase below it. Use Figure 2.3 to help you.

**Meiosis I**



**Meiosis II**



11. During which phase do homologous chromosomes separate?

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12. During which phase do sister chromatids separate?

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**MAIN IDEA:** Haploid cells develop into mature gametes.

13. What does a sperm cell contribute to an embryo?

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14. What does an egg contribute to an embryo?

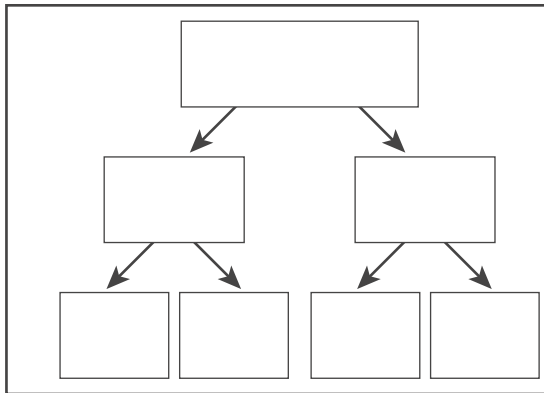
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15. Where are polar bodies made, in the male or in the female?

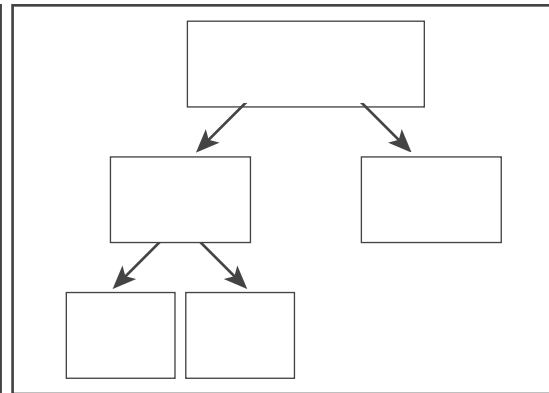
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Complete the diagram of gametogenesis in the boxes below. Use Figure 2.4 to help you.

**Sperm Formation**



**Egg Formation**



**Vocabulary Check**

16. *Genesis* comes from a Greek word that means “to be born.” How does this relate to the meaning of gametogenesis?

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17. What is a polar body?

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