

Name _____

Gametogenesis Unveiled: The Tale of Male and Female Reproduction

Short Answer Key

1. Spermatogenesis produces four sperm cells continuously, starting at puberty, while oogenesis produces one mature ovum and several polar bodies, beginning before birth and continuing until menopause.
2. Spermatogenesis continues throughout a man's life because spermatogonia continuously undergo mitosis. In contrast, females are born with a fixed number of primary oocytes.
3. The polar body in oogenesis is a smaller cell that contains very little cytoplasm and genetic material. Its significance lies in reducing the genetic material to half in the resulting ovum while preserving the necessary nutrients for early development.
4. The timing of oogenesis ensures that one primary oocyte matures each month, increasing the chances of successful fertilization during the monthly reproductive cycle.
5. Genetic diversity is important in gametogenesis because it ensures that each offspring has a unique combination of traits, contributing to the diversity and adaptability of a species.

