

Human Prenatal Development Investigation 2 Quiz

Name: _____ Date: _____

Please use the back of this quiz if you need additional space.

1. Define meiosis. Your definition should describe both what happens and why it is necessary for human reproduction.
2. What is the main difference between mitosis and meiosis? Explain your answer in terms of *chromosome number* ($1n$, $2n$) and genetic information.
3. During fertilization, what happens when a sperm cell and an ovum unite? In your answer, include the term zygote and explain its significance.
4. Which statement best describes the genetic result of meiosis? (circle one)
 - A. Meiosis produces cells that are genetically identical to the parent cell
 - B. Meiosis produces cells with half the chromosome number of the parent cell
 - C. Meiosis produces cells with random chromosome numbers
 - D. Meiosis produces cells used for growth and tissue repair
5. Why is it important that meiosis and fertilization occur in a precise, regulated order during human prenatal development? Explain what could happen if errors occurred during these processes.