

Human Prenatal Development

Investigation 1 Quiz (KEY)

Name: _____ Date: _____

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

1. Define mitosis.

The process by which a cell divides to produce two genetically identical daughter cells.

2. Label the following stages of mitosis:

Prophase

Metaphase

Anaphase

Telophase



prophase



telophase



anaphase



metaphase

3. Why is mitosis essential for growth and development in multicellular organisms?

Mitosis allows organisms to grow, replace damaged cells, and develop by producing new cells with identical genetic information.

4. During mitosis, the genetic information in the daughter cells is:

- A. Different from the parent cell
- B. Half the amount of the parent cell
- ➔ C. Identical to the parent cell
- D. Randomly assorted

5. Why is it important that mitosis produces daughter cells with identical genetic information?

Producing daughter cells with identical genetic information ensures consistency in structure and function, allowing tissues and organs to develop and operate properly.