

Cell Processes and Energy • Review and Reinforce

Cell Division

Understanding Main Ideas

Fill in the blanks in the table below. Then answer the questions that follow in the spaces provided.

Phases of Mitosis

Phase	Event
Prophase	1. _____
2. _____	Chromosomes attach to spindle fibers.
Anaphase	3. _____
4. _____	New nuclear envelope forms.

- Which stage of the cell cycle usually lasts longest?
- During which stage of the cell cycle does DNA replication occur?
- During which stage of the cell cycle does the cell membrane pinch the cell in two?

Building Vocabulary

Match each term with its definition by writing the correct letter in the blank.

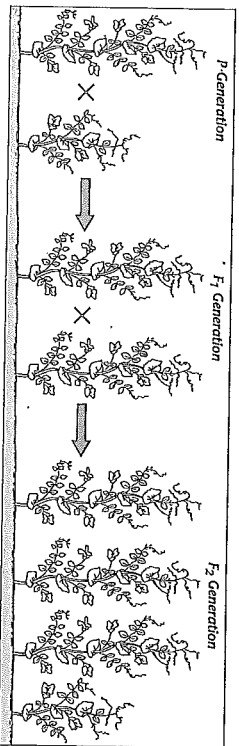
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|---|----------------|
| _____ 8. Regular sequence of growth and division that cells undergo | a. interphase |
| _____ 9. First stage of the cell cycle | b. mitosis |
| _____ 10. Process in which DNA is copied | c. cell cycle |
| _____ 11. Stage of the cell cycle during which the cell's nucleus divides | d. cytokinesis |
| _____ 12. Doubled rod of condensed chromatin | e. replication |
| _____ 13. Final stage of the cell cycle | f. chromosome |

Genetics: The Science of Heredity • Review and Reinforce

Mendel's Work

Understanding Main Ideas

Study the diagram. Then answer the following questions on a separate sheet of paper.



- What trait in pea plants is being studied in the cross above?
- What are the two alleles of this trait?
- Which allele is the dominant allele? Explain how you know.
- Which allele is the recessive allele? Explain.
- What alleles do the F₁ offspring have? Explain which allele was inherited from which parent.

Building Vocabulary

Match each term with its definition by writing the letter of the correct definition on the line beside the term.

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|---------------------------|---|
| _____ 6. genetics | a. the passing of traits from parents to offspring |
| _____ 7. alleles | b. an organism with two different alleles for a trait |
| _____ 8. traits | c. factors that control traits |
| _____ 9. recessive allele | d. physical characteristics of organisms |
| _____ 10. genes | e. an allele whose trait always shows up in the organism |
| _____ 11. hybrid | f. the different forms of a gene |
| _____ 12. heredity | g. the scientific study of heredity |
| _____ 13. dominant allele | h. an allele whose trait is masked in the presence of a dominant allele |