

## Genetics

### Brainpop—Mitosis

Name:

Period:

Watch the Brainpop on growth, then answer the questions below. You can check your work using Chapter 5, Section 2 of your textbook.

- \_\_\_\_\_ 1. How do cells grow?
- by increasing the size of their nuclei
  - by dividing to make two cells
  - by taking in water and slowly expanding
- \_\_\_\_\_ 2. In cell division, which part divides first?
- The nucleus
  - The cell membrane
  - The cell wall
- \_\_\_\_\_ 3. What is a chromosome?
- a small piece of a cell membrane
  - two DNA molecules held together by a centromere
  - the protein center of a cell
- \_\_\_\_\_ 4. How many chromosomes are in one cell of a human?
- 1
  - 23
  - 46
- \_\_\_\_\_ 5. During the start of mitosis (prophase) which structures become visible?
- duplicated cell walls
  - duplicated nuclei
  - duplicated chromosomes
- \_\_\_\_\_ 6. When do duplicated chromosomes line up across the center of the cell?
- during the start of mitosis (prophase)
  - during the middle of mitosis (metaphase)
  - during the end of mitosis (telophase)
- \_\_\_\_\_ 7. What happens at the end of mitosis?
- the cell membrane splits
  - the nucleus splits again
  - the chromosomes merge
- \_\_\_\_\_ 8. How is plant cell mitosis different from animal cell mitosis?
- plant cells have rigid cell walls and no centrioles
  - plant cells don't undergo mitosis
  - plant cell mitosis is much slower
- \_\_\_\_\_ 9. What does mitosis produce?
- Two different nuclei with similar chromosomes
  - Two identical nuclei with the same chromosomes as the parent cell
  - Nuclei that have half of their chromosomes from each of the two parent cells



Take a close look at this picture from the cartoon. What does it have to do with mitosis?