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The graph shows the changes in antibiotic resistance of *Streptococcus pneumoniae* over time.

- a. Based on the graph, which antibiotic had *Streptococcus pneumoniae* become **most** resistant to by 1999?
- b. Describe what usually happens to a population of *Streptococcus pneumoniae* immediately after it is exposed to a **new** antibiotic.
- c. Explain, in detail, how antibiotic-resistant populations of *Streptococcus pneumoniae* develop over time as a result of the process of natural selection.