

- Using the corresponding webpage(s) define the following terms:
  - [http://en.wikipedia.org/wiki/Deterministic\\_system\\_\(mathematics\)](http://en.wikipedia.org/wiki/Deterministic_system_(mathematics)) - Deterministic System
  - [http://en.wikipedia.org/wiki/Dynamical\\_system](http://en.wikipedia.org/wiki/Dynamical_system) - Dynamical System
  - <http://en.wikipedia.org/wiki/Attractor> - Attracting Set
  - <http://mathworld.wolfram.com/StrangeAttractor.html> - Strange Attractor
  - [http://en.wikipedia.org/wiki/Fractal\\_dimension](http://en.wikipedia.org/wiki/Fractal_dimension) - Fractal Dimension
  - <http://en.wikipedia.org/wiki/Fractal> - Fractal
  - [http://en.wikipedia.org/wiki/Chaos\\_theory](http://en.wikipedia.org/wiki/Chaos_theory) - Chaos
- Explain the roll of fixed points in describing the behaviors of solutions to a system of differential equations.

3. Explain the qualitative differences between the configuration in phase space of fixed points for a linear system to that of a nonlinear system.

4. Using your favorite search engine give three examples of chaotic systems and their physical or natural relevance.

5. List three questions you have after the presentation and this quiz.