Corresponding time-series graphs for this orbit.

The iteration rule $x \rightarrow 3.9(1 - x)$ in each case. Sketch the (approximate)
Here are the graphical iterations corresponding to several different seeds for

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Investigations (Continued)

Lesson 5 - Nonlinear Iteration

NAME(S):
6 | Matching graphs

Here are six time-series graphs and six graphical iterations. Match the correct graphs.

A. 

B. 

C. 

D. 

E. 

F.
7 Target practice

Below is the graph of \( y = 4x(1 - x) \) for \( 0 \leq x \leq 1 \). \( A \) is the interval \( 0 \leq x \leq \frac{1}{2} \) and \( B \) is the interval \( \frac{1}{2} \leq x \leq 1 \). We give you a sequence of \( A \)'s and \( B \)'s and your job is to find an orbit that visits the intervals \( A \) and \( B \) in exactly that order. The sequence is called the itinerary of the seed. For example, for the sequence \( ABA \), the seed \( x_0 \) has the correct itinerary.
Sketch an orbit corresponding to each of the following itineraries using graphical iteration.

a. AABB

b. ABBAB

c. BBBBA

Technology Tip

You may use the following applet to help you find these orbits:

http://math.bu.edu/DYSYS/applets/target.html
8. Cycle Practice

Each of the following itineraries corresponds to a cycle for the iteration rule $x \rightarrow 4x(1 - x)$. Use graphical iteration to sketch the orbit of a cycle that has the given itinerary.

a. BBBB...

b. ABABAB...

c. AABAAB...

d. ABBABB...