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Nonlinear Dynamics: Mathematical and Computational Approaches
Lead instructor: ✉ Liz Bradley

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✓ 7.3 Sections and projections » Quiz   ← Prev   Next →

Quiz scores are NOT recorded.
- You may come back to quizzes and take them as many times as you like
- When you are finished, clicking the "Score" button at the bottom of the test will show you the correct responses.

Question 1
Both projections and sections reduce the dimension of an object.

✔ ⦿ A. True
◯ B. False

Question 2
A medical x-ray performs a projection operation.

✔ ⦿ A. True
◯ B. False

Question 3
Meauring the value of a single state variable of a dynamical system is like performing a section.
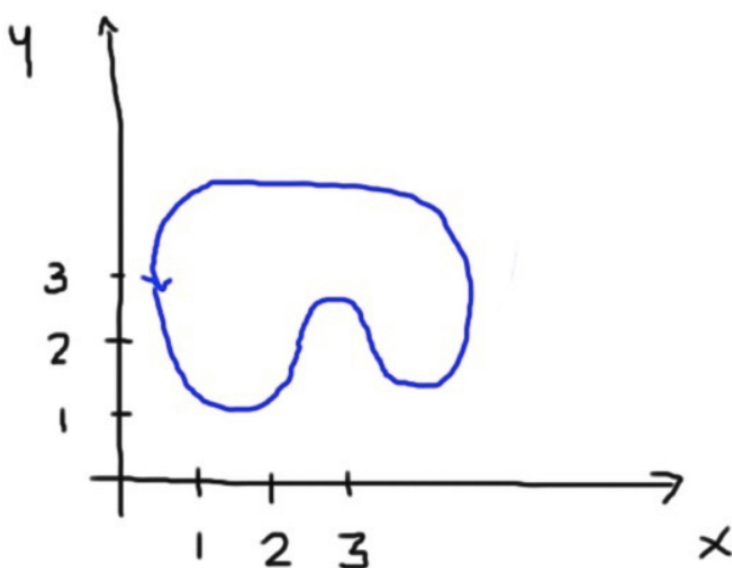
✖ ⦿ A. True
◯ **B. False**

Question 4
Sections can be slices in time or slices in (state) space.

✔ ⦿ A. True
◯ B. False

Question 5
Consider the following orbit of a dynamical system (in blue in the following figure).

(a)

What will you see if you perform a spatial Poincare section of this object with a plane of section $x = 3$?

- ○ A. A middle-half removed Cantor set
- ○ B. An equally spaced circle of points
- ✔ ◉ C. Two points
- ○ D. Four points
- ○ E. One point

(b)

What type of dynamics is this type of section associated with?

- ✔ ◉ A. 2-cycle
- ○ B. 4-cycle
- ○ C. Chaos
- ○ D. Fixed point

(c)

What will you see if you perform a spatial Poincare section of this object with a plane of section $y = 2$?

- ○ A. A middle-half removed Cantor set
- ○ B. An equally spaced circle of points
- ○ C. Two points
- ✔ ◉ D. Four points
- ○ E. One point

(d)

What type of dynamics is this type of section associated with?

- ○ A. 2-cycle
- ✔ ◉ B. 4-cycle
- ○ C. Chaos
- ○ D. Fixed point

You got **7** out of **8** questions correct   Reset