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Nonlinear Dynamics: Mathematical and Computational Approaches

Lead instructor: [Liz Bradley](#)

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✓ 7.5 Fractals and chaos » Quiz

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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

Fill in the blank. [...] chaotic systems have fractal state-space structure.

- ☐ A. Only a few
- ☐ B. All
- ✓ ☒ C. Most

Question 2

[Experts: Almost all] fractals have non-integer fractal dimension.

- ✓ ☒ A. True
- ☐ B. False

Question 3

[Experts: Almost all] fractals are self similar objects.

- ✓ ☒ A. True
- ☐ B. False

Question 4

The fractal dimension of the middle-fifth-removed Cantor set is smaller than that of the middle-third-removed Cantor set.

- ☐ A. True
- ✓ ☒ B. False

Question 5

 $\log(2^3) =$

- ☐ A. $2 \log(2)$
- ✓ ☒ B. $3 \log(2)$
- ☐ C. Undefined

Question 6

What is the capacity dimension of the middle-third-removed Cantor set?

- ✓ ☒ A. 0.6309
- ☐ B. $-\log(\frac{1}{3})$
- ☐ C. 0.3333
- ☐ D. 0.8614

Question 7

What is the capacity dimension of the middle-fifth-removed Cantor set?

- ☐ A. 0.6309

- ☐ B. $-\log(\frac{1}{5})$
- ☐ C. 0.2
- ☒ D. 0.7565

You got 6 out of 7 questions correct

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