A Mass-Spring-Damper system is tested to determine the value of the viscous damping coefficient c. Assume k = 10 lb/ft and m = 2 slug. The vibrational amplitude is observed to decrease to 33% of its initial value after two consecutive cycles. What is the value of the viscous damping coefficient c?

a. 0.9376
b. 0.8442
c. 0.779
d. 0.6538

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