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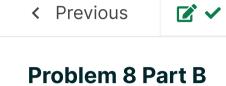


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Final due Dec 14, 2022 07:30 +08

Follow the next steps of the simulation to answer the remaining questions.

Step 4: Assume MAXRABBITPOP = 1000, CURRENTRABBITPOP = 500, CURRENTFOXPOP = 30, numSteps = 200. Plot two curves, one for the rabbit population and one for the fox population. You won't be submitting the plots. They are for your own understanding.

Step 5: Use polyfit to find the coefficients of a 2nd degree polynomial for the rabbit curve and the same for the fox curve. Then use polyval to evaluation the 2nd degree polynomial and plot it, e.g.

```
coeff = polyfit(range(len(rabbitPopulationOverTime)), rabbitPopulationOverTime, 2)
plot(polyval(coeff, range(len(rabbitPopulationOverTime))))
```

Of course your variables and plotting commands may not look identical to the above code; the above code is shown just to give you an idea of what we mean.

Once you have finished Steps 4 and 5, continue on to answer the following questions.

Problem 8-2

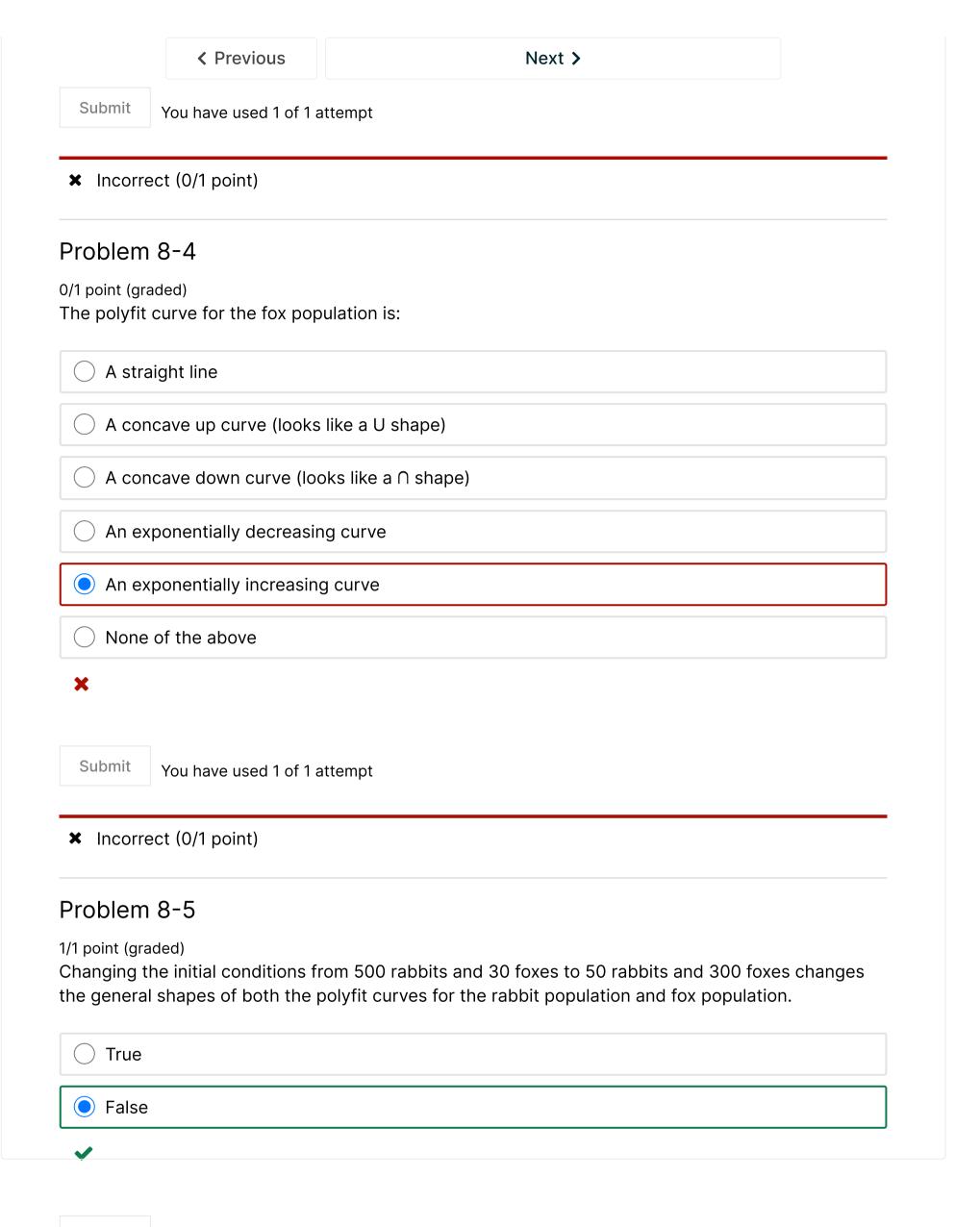
1/1 point (graded)

At some point in time, there are more foxes than rabbits.
True
○ False
Submit You have used 1 of 1 attempt
✓ Correct (1/1 point)
Problem 8-3
0/1 point (graded) The polyfit curve for the rabbit population is:
A straight line
A concave up curve (looks like a U shape)
○ A concave down curve (looks like a ∩ shape)
An exponentially decreasing curve



An exponentially increasing curve

None of the above



Submit

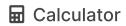
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