

Course > Week... > Probl... > Ques...

Question 3 Question 3

3. <u>Yellowstone National Park</u> began a project to restore its native wolf population in the mid 1990's. Below are the number of wolves soon after the start of the project:

Year	Years since Project Began	Number of Wolves
1996	1	25
1998	3	45

problem

1/1 point (graded)

3a. Researchers fit a linear model to the wolf data. Using this model, how many wolves were being added to the park each year? (Round to a whole number.)



Submit

You have used 1 of 1 attempt

problem

1/1 point (graded)

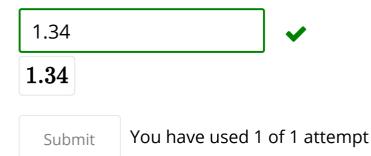
3b. According to their linear model, what was the size of the original wolf population when the project began?



problem

1/1 point (graded)

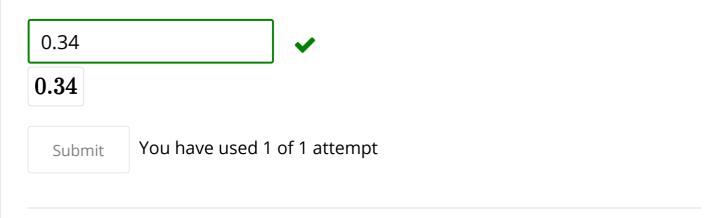
3c. Another researcher assumed that the wolves would experience exponential growth because there were no predators. He fit an exponential model to this data. What is the **growth factor** for this model? (Round to 2 decimal places.)



problem

1/1 point (graded)

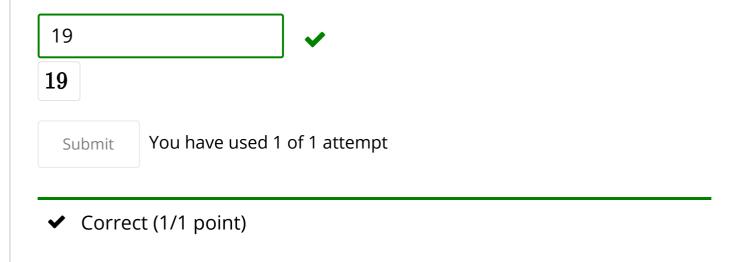
3d. What is the annual **growth rate** of these wolves each year, according to this model? (*Report as a proportion rounded to 2 decimal places.*)



problem

1/1 point (graded)

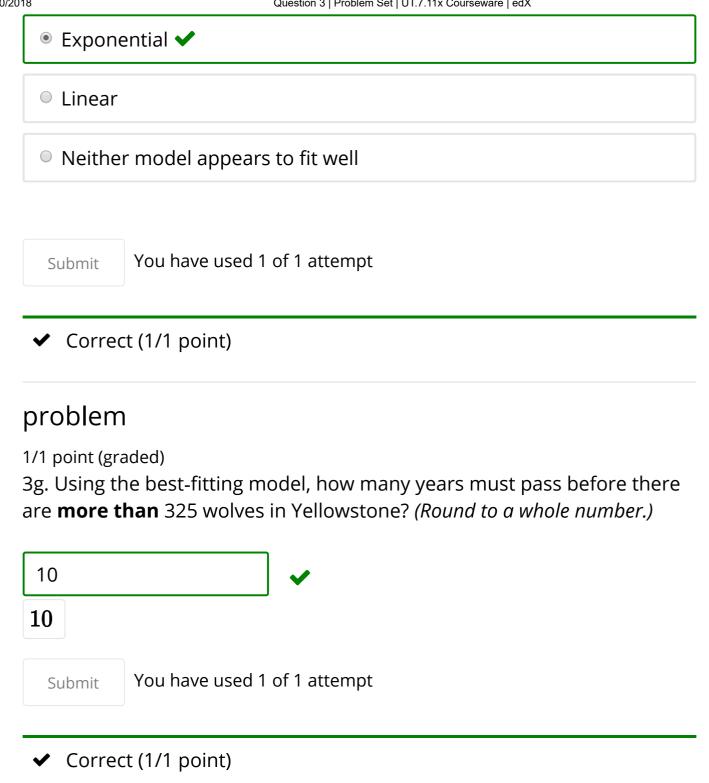
3e. Assuming exponential growth, find the initial number of wolves when the project began. Use your rounded answer from the previous question. (Round to a whole number.)



problem

1/1 point (graded)

3f. By 2002, there were 147 wolves in Yellowstone Park. Which model was determined to fit the data better?



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