Courseware **Course Info** Discussion **Syllabus Download R and RStudio R Tutorials** Readings **Contact Us Progress** Community Office Hours

## Question 3

3. Yellowstone National Park 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

(1/1 point)

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 zero decimal places.)

10

1 of 5 01/28/2015 03:58 PM 10

Answer: 10

Hide Answer

You have used 1 of 1 submissions

(1/1 point)

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

15

15

**Answer:** 15

**Hide Answer** 

You have used 1 of 1 submissions

(1 point possible)

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 his model? (Round to 2 decimal places.)

1.8

1.8

2 of 5

01/28/2015 03:58 PM

**Answer:** 1.34

**Hide Answer** 

You have used 1 of 1 submissions

(1/1 point)

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.)

0.34

0.34

Answer: .34

**Hide Answer** 

You have used 1 of 1 submissions

(1/1 point)

3e. Assuming exponential growth, find the initial number of wolves when the project began. (Round to zero decimal places.)

19

19

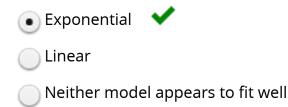
**Answer:** 19

**Hide Answer** 

You have used 1 of 1 submissions

(1/1 point)

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



**Hide Answer** 

You have used 1 of 1 submissions

(1 point possible)

3g. Using the best-fitting model, how many years must pass before there are **more than** 325 wolves in Yellowstone? (Round to zero decimal places.)

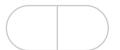
84

84

Answer: 10

**Hide Answer** 

You have used 1 of 1 submissions





EdX offers interactive online classes and MOOCs from the world's best universities. Online courses from MITx, HarvardX, BerkeleyX, UTx and many other universities. Topics include biology, business, chemistry, computer science, economics, finance, electronics, engineering, food and nutrition, history, humanities, law, literature, math, medicine, music, philosophy, physics, science, statistics and more. EdX is a non-profit online initiative created by founding partners Harvard and MIT.

© 2015 edX, some rights reserved

Terms of Service and Honor Code

Privacy Policy (Revised 4/16/2014)

## About edX

About

News

Contact

FAQ

edX Blog

Donate to edX

Jobs at edX

## Follow Us



Twitter



Facebook



Meetup



in LinkedIn



**S**+ Google+

5 of 5 01/28/2015 03:58 PM