winmath
Career Infused Capstone Projects

Name:

Burmese Python Television Interview

The local television station wants to run a story on the pythons. A reporter will interview you for the story. The reporter asked you to prepare for the interview by answering a series of questions about your research on the pythons. Because you are a new natural science manager, the station also wants to be certain your computations are correct.

After completing your calculations, you are ready to be interviewed. You may choose to:

1. Create a video of yourself being interviewed.
Ask a classmate to play the role of the reporter while you act as the natural science manager. Consider writing out a script so that you both feel comfortable with what you'll say on camera. Be sure to include the interview questions and calculations to the right and any other information you feel would make the interview come alive, like what makes you qualified to lead this study and what the viewers at home should know about the python problem in Florida.

2. Create a slideshow presentation to include with your interview.
You can assume the folks watching the newscast will not know much about the invasive species problem in Florida, so you should create a visually interesting presentation to accompany your interview. You should include your calculations and answers to the interview questions, but instead of just talking to the news reporter, you'll be able to show him or her and the audience a visual representation of what you are describing. Present the slideshow to the class, while a classmate helps by asking the interview questions.

3. Be creative!
Design your own way to pull all the information from your study on invasive pythons in Florida together. As the natural science manager, you are the expert in your field. Remember, your presentation or project should include the calculations and answers to the reporter's interview questions. Be sure to get prior approval about your presentation idea from your teacher before you get started.

Question 1

We understand that many pythons were captured near Everglades Headquarters and released some miles away from the place where they were captured. You have been tracking the pythons. Where are they now?

Question 2

What are the average weight and length of the pythons that were captured and released? Express your answers as mixed numbers in simplest form.

Question 3

Explain or show how you found the average length. Include a detailed explanation that tells how to add and divide fractions.

Question 4

You determined that the pythons are healthy by computing their weight-to-length decimals. Explain in detail how to compute a weight-to-length decimal.

Question 5

Researchers just captured and released another python 40 days ago. Every 10 days, the researchers measure the distance the python traveled since the last measurement. The table shows the distances the python traveled every 10 days.

Distance			
Day 10	**Day 20**	**Day 30**	**Day 40**
$2\frac{3}{5}$	$2\frac{7}{8}$	$2\frac{5}{8}$	$2\frac{1}{4}$

Show how to determine the average daily rate of the python. (To find the average, add the distances and divide by 40.)

Question 6

Many scientists are concerned that the pythons will harm populations of native animals. A python eats about 5 pounds of food per year for every pound of weight. The average python weighs $109\ \frac{1}{3}$ pounds. How many pounds of food does the average python eat in a year? Show or explain how you found your answer.

Question 7

Some scientists estimate there are 70,000 female Burmese pythons in Florida today. On average, $\frac{3}{5}$ of all eggs laid will hatch. If every female python alive today has 5 nests of 34 eggs, how many new pythons will hatch? Show or explain how you found the answer.

Question 8

Explain to the public why you believe the invasion of pythons is an environmental concern.

