

Owl Pellet Lab

Weight of pellet _____ *grams*.

Table 1: Types of animal parts and quantities found.

Prey Found	Number of Bones Found
Mammal	
Bird	
Amphibian	
Reptile	
Other (type)	

Table 2: Mammal bones found in pellet.

Bones found	#	Bones found	#
Humerus		Femur	
Ulna		Fibula & Tibia	
Radius		Pelvis	
Scapula		Ribs	
Vertebra		Various foot bones	
Mandibles (Lower Jaws)		Skulls	
Claws			

Notes and Additional Observations:

Table 3: Mammalian skulls found.

Prey Found	Number of Skulls Found
Vole	
Mole	
Shrew	
Mice	
Rats	
Gopher	

Table 4: Compiled class data.

Prey Found	Vole	Mole	Shrew	Mice	Rats	Gopher
Total # of prey items found:						
Total # of pellets dissected:						
Average # of prey items per pellet:						
% prey consumed:						

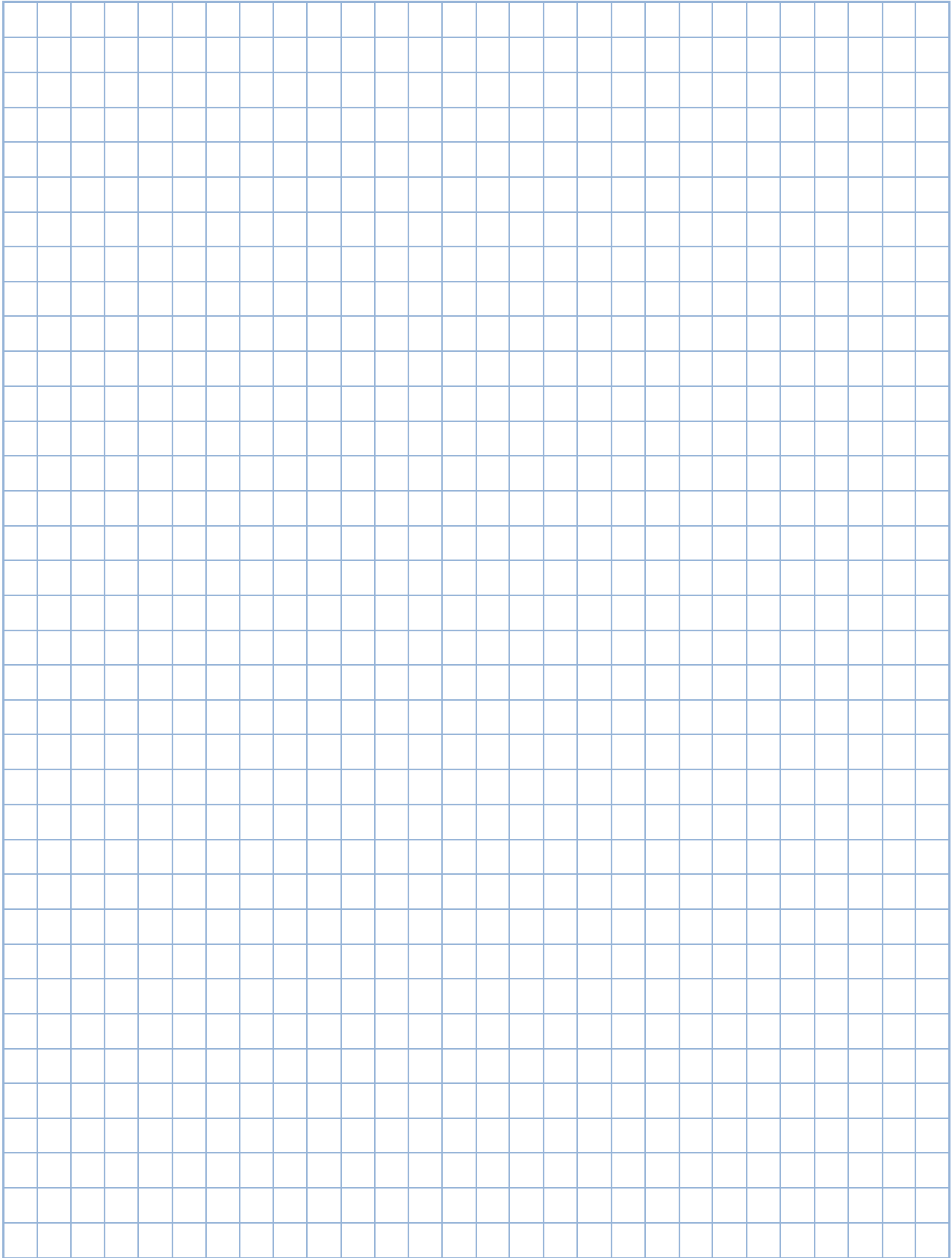
Analysis:

- Using class data, calculate **% prey consumed** in numbers. Refer to **Table I** for prey biomass conversion factors. Record in Table 5.

Table 5: Class percent biomass.

Prey item	Conversion factor	Biomass units	% of biomass
X		=	
X		=	
X		=	
X		=	
X		=	
X		=	
	Total Biomass Units:		

- Generate two bar graphs on the graph paper provided. (See example Graphs A and B). Be sure to include labeled axis, and titles.
 - Quantity of prey consumed in numbers with % depicted (Graph A).
 - Quantity of prey consumed in unit biomass with % depicted (Graph B).
- Using class data, determine the correlation coefficient (r-value), and **relationship between pellet mass and the number of prey items found** in the pellet. Use *Excel* to generate a scatter plot with line of best fit to determine the correlation coefficient. *Extra credit for attaching a print out of the line graph, depicting the r-value, and equation of the line.*
- Correlation coefficient (r value) =** _____
- Use the space provided to draw the **entire class food web**.



Conclusion Questions:

1. In reference to your compiled class data, what type of prey is most abundant? Why would this be a favored food item?

2. Which organism has the most biomass? Why?

* Compare Graph A (% Prey Type Consumed), to Graph B (% Biomass of each Prey Group Consumed).

3. How do these two graphs differ from one another and why?

[you may find it helpful to refer to data for specific animals when answering this question]

4. Assuming that a barn owl regurgitates one pellet per day, how many prey items would the owl that produced your pellet consume per year? **Circle your answer & show your work for credit.**

5. Is there a correlation between pellet mass and the number of prey items in the pellet? If so, what type of relationship? Please include a discussion of the correlation coefficient (r-value).

6. Which bones were easiest to identify? Why?
