OWL PELLET LAB
DATA SHEET AND QUESTIONS

Name _____

TYPE OF PREY AND NUMBER OF EACH PREY TYPE FOUND IN THE OWL PELLET:

- _____
- _____
- _____

QUESTION 1:

If you were to collect all the owl pellets dropped from an owl for a whole year, what information could be obtained from the owl pellets? Be complete (give at least four major things).

[Use as much space as needed to answer the question]

QUESTION 2:

Given these data on percentage of barn owl diet that each prey type makes up in a year (for example, 30% of the diet of barn owls in the state of Washington are mice), please answer the following questions:

Prey type	British Columbia	Oklahoma	Texas	Washington
Voles	66	1	2	55
Mice	3	35	40	30
Rats	1	54	32	1
Shrews	13	4	15	5
Other	17	6	11	93

Ignoring the “Other” category, what pattern do you see that would allow you to predict barn owl diet in another state/province? Give a possible reason (hypothesis) for the pattern (hint: how do the habitats compare among the states/provinces).

[Use as much space as needed to answer the question]

QUESTION 3:

DENTAL FORMULA: When identifying mammals, we often use their dental formula (the number of each tooth type on one side of the skull for both the upper and lower jaws).

Example: 3 1 4 2 (Upper left jaw incisors, canines, premolars, molars)
3 1 4 3 (Lower left jaw incisors, canines, premolars, molars)

This mammal has 6 upper (3 upper left jaw and 3 upper right jaw) and 6 lower incisors, 2 upper and 2 lower canines, 8 upper and 8 lower premolars, and 4 upper and 6 lower molars on one side of the skull for a total of 42 teeth in its head.

Diet may by indicated by the dental formula as indicated in the examples below:

Dental Formula	Type of Feeding	Representative Groups
1/1, 0/0, 1/1, 3/3	Bark, nuts, roots	Beaver, porcupine, many squirrels
2/1, 0/0, 3/2, 3/3	Browsing (twigs)	Rabbits, hares
0/3, 0/1, 3/3, 3/3	Grazing (grass)	Deer, bison, sheep
2/2, 1/1, 2/2, 3/3	Omnivory	Humans
3/3, 1/1, 4/4, 2/3	Predation	Dogs (incl. coyotes, fox), bears
3/3, 1/1, 3/2, 1/1	Strict Carnivores	Cats (incl. mountain lion, bobcat)

State three generalizations you can make that would allow you to predict the general type of feeding that an animal uses if you found a skull and recorded its dental formula. Give a possible reason (hypothesis) for each generalization you make. Hint: you may want to look up the function(s) of the various types of teeth (incisors, canines, premolars, molars).

[Use as much space as needed to answer the question]