Name: _____ Date: _____

Union, Intersection and Complement in Venn diagrams

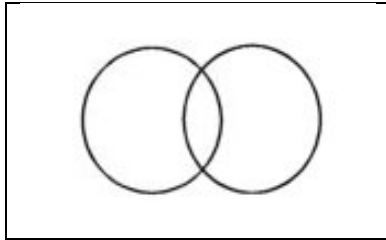|	
	Set A such as {1,2,3,4,5…..}
	A' is the complement of Set such as {… -5, -4, -3, -2, -1, 0}
	A U B is the union of sets A and B
	A Π B is the intersection of sets A and B
	Both sets A and B are disjointed
	Null set is nothing
	Universal set is everything

1. Draw and label four Venn diagrams matching the terminology below
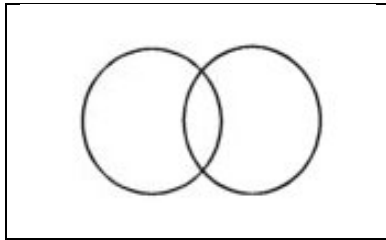
a. A   B
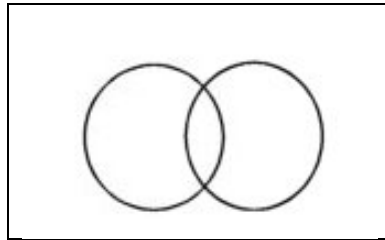
b. A′

c. S ∪ T
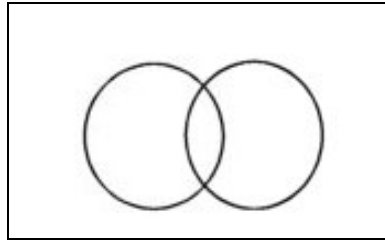
d. ~A

2. Draw and label four Venn diagrams matching the terminology below
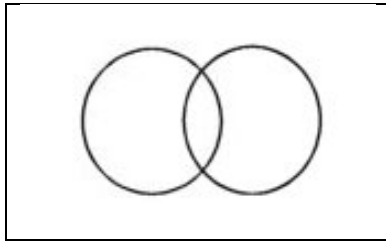
e. ~(A   B)
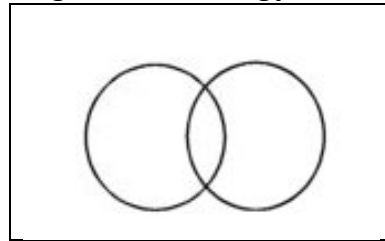
f. ~(S ∪ T)
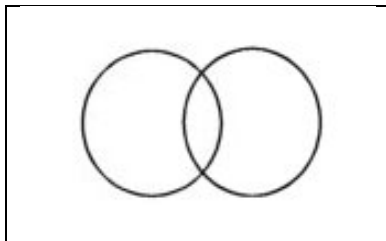
g. A   B + B
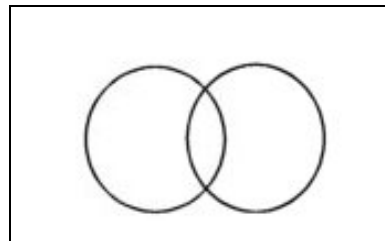
h. A   B - A

3. Draw and label four Venn diagrams matching the terminology below

i. ~A

j. B′

k. Φ

l. U

4. (A U B) ∩ C
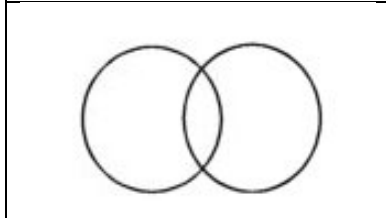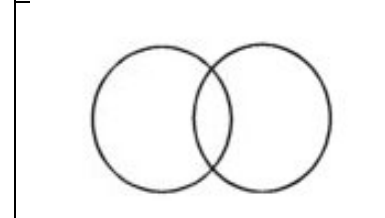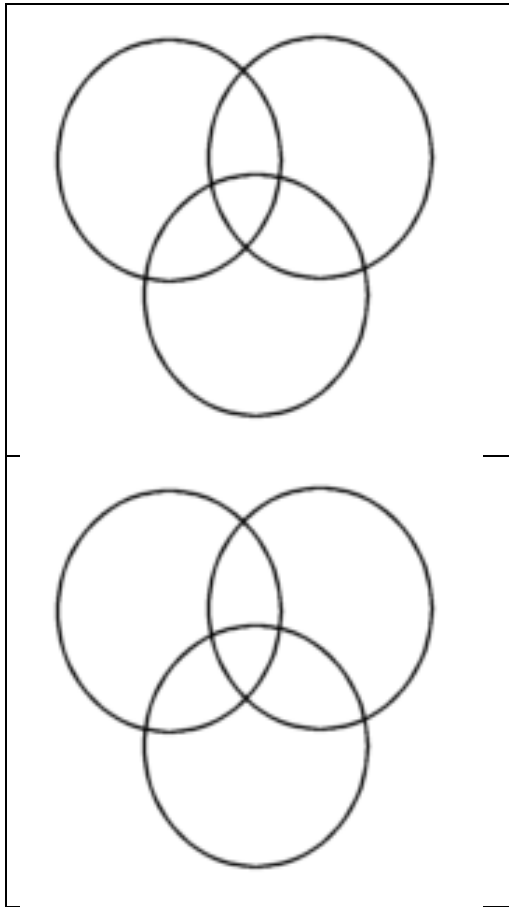
5. (A ∩ B) U C

6. Place the correct numbers and labels in the Venn Diagram

600 adults were tested about their eating habits. They were asked what mealtimes they follow consistently.
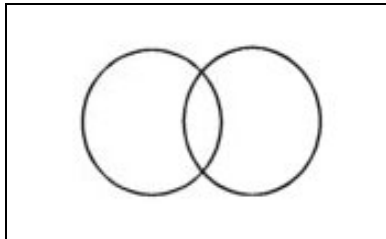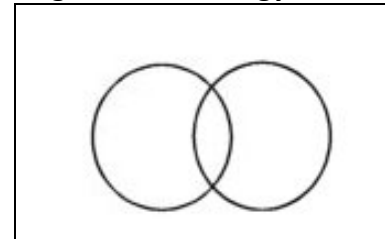
Breakfast: 142
Lunch: 225
Dinner: 227
Breakfast and lunch: 95
Breakfast and dinner: 87
Lunch and dinner: 151
All three: 49

7. **Place the correct numbers and labels in the Venn Diagram**

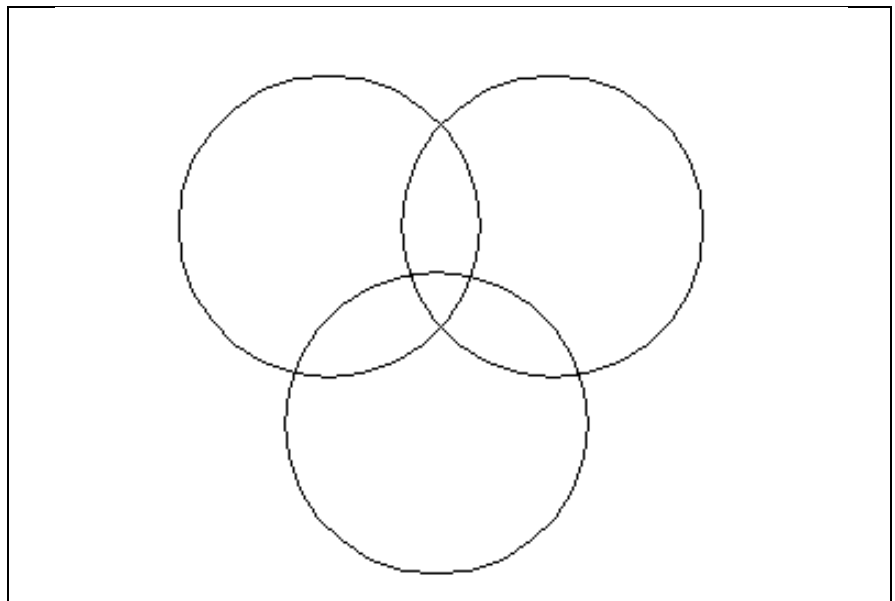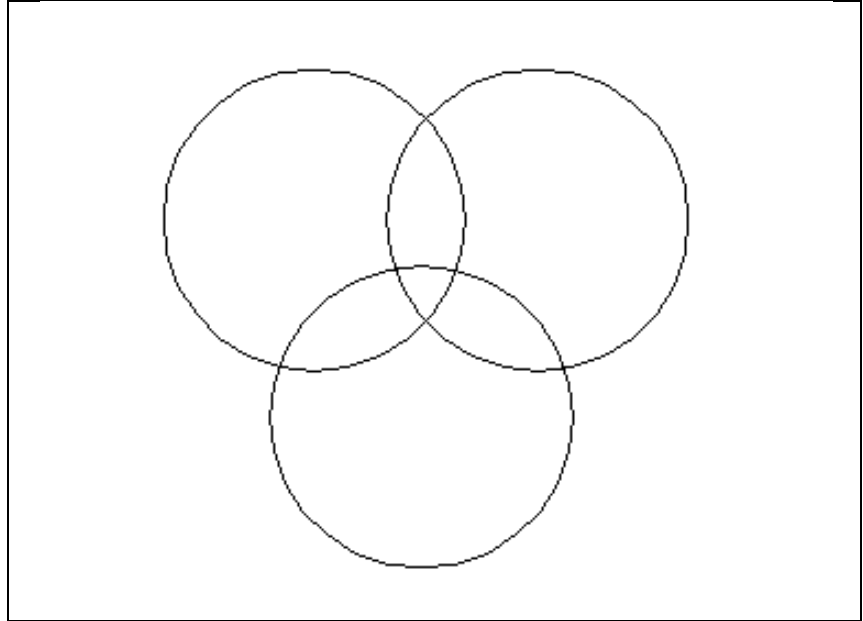500 pet owners were surveyed. Place the results of the survey in a Venn diagram.

Owners with:

Dogs	299
Cats	180
Hamsters	47
Dogs and cats	88
Dogs and hamsters	12
Cats and hamsters	15
All three	4

8. Place the correct numbers and labels in the Venn Diagram

300 sports fans were surveyed about their choices of sports when considering watching baseball, football and golf. The results are shown below. Create a Venn Diagram for this survey.

Baseball: 75
Football: 95
Golf: 87
Baseball and football: 21
Baseball and golf: 15
Football and golf: 10
All three: 7