Name:
Result:

1.   *(3 points)*
Let:
$$A = \{1, 2, 3, 4, 5\} \qquad B = \{2, 4, 6, 8\} \qquad C = \{1, 3, 5\}$$
State if the following statements are true (T) or false (F):

$B - A = \{1, 3, 5, 6, 8\}$

$6 \in B$

$C \subset A$

$A - B = C$

$8 \in (A \cap B)$

$B \cap C = \emptyset$

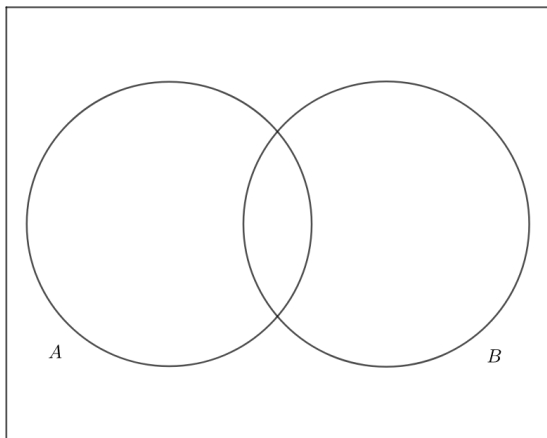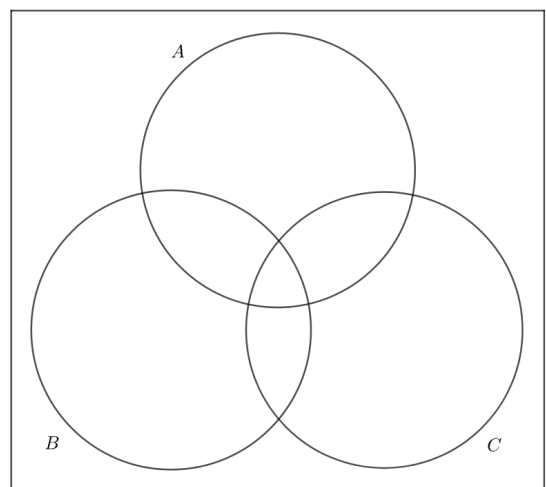**1.**   *(2 points)*
On the following diagrams mark the regions representing the sets:

$(A \cap B)^c$ $(A \cup B) - C^c$

3.   *(2 points)*

A class consists of 20 students. When asked what food they like 15 answered pizza, 12 answered sushi and 2 answered that they don't like neither pizza nor sushi. Find the number of students who like both pizza and sushi.

4.   *(5 points)*

In a group of 40 people:

30 can speak English,
13 can speak German,
6 can speak Spanish,
9 can speak both E. and G.,
5 can speak both E. and S.,
4 can speak both G. and S.,
5 cannot speak any of the three languages.

Find the number of people in this group who:

(a) can speak all three languages,

(b) can speak exactly one of the three languages,

(c) can speak more English and exactly one other language.