Name:
Result:

1. *(3 points)*

Let:

$$A = \{1, 2, 3, 4, 5\} \qquad B = \{2, 4\} \qquad C = \{1, 3, 5, 7\}$$

State if the following statements are true (T) or false (F):

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

$6 \in B$

$C \subset A$

$A - B = C$

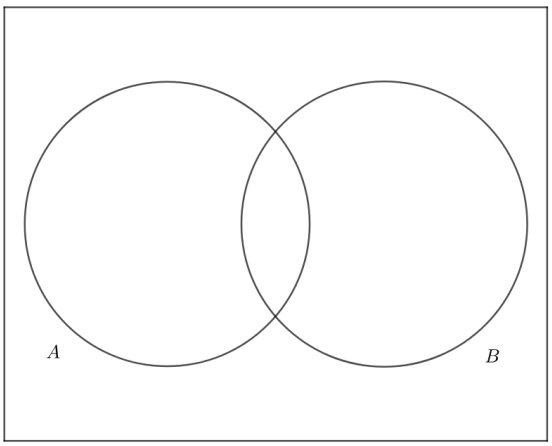
$4 \in (A \cap B)$

$B \cap C = \emptyset$

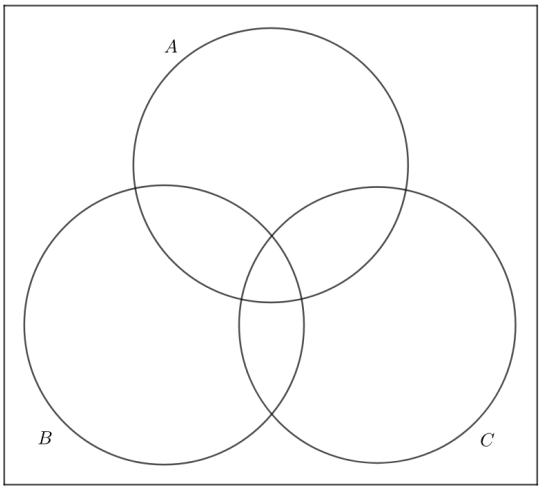
1. *(2 points)*

On the following diagrams mark the regions representing the sets:

$(A \cup B)^c$



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



3. *(2 points)*

A class consists of 20 students. When asked what food they like 14 answered pizza, 11 answered sushi and 3 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:

33 can speak English,
13 can speak German,
8 can speak Spanish,
9 can speak both E. and G.,
6 can speak both E. and S.,
5 can speak both G. and S.,
2 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.