

AAU - Business Math I (MTH 111/3) - Fall 2010

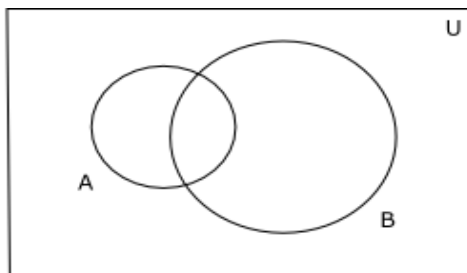
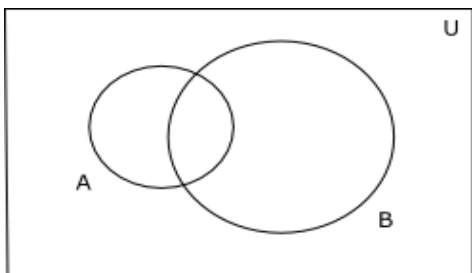
1. Find the following sets on the Venn diagrams below:

(a)

$$A \setminus B$$

and

$$A \cap B^c$$

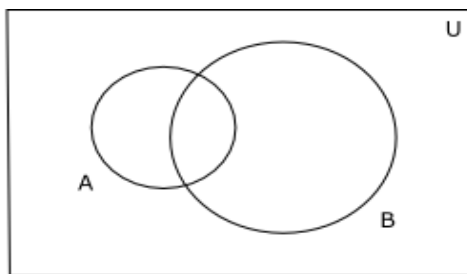
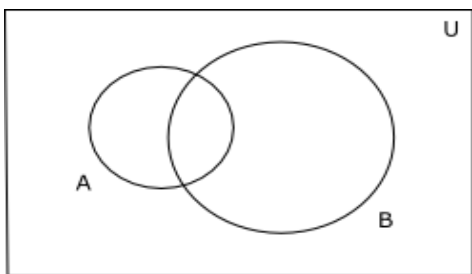


(b)

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

and

$$A^c \cap B^c$$

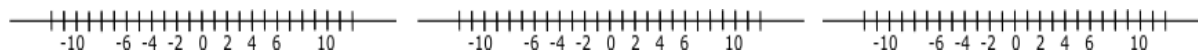


2. Depict the following intervals on real lines below:

$$(-2, 7)$$

$$[1, 10]$$

$$(-\infty, 2]$$



3. Find intercept and union of the following intervals:

(a)  $A = (-2, 8]$ ;  $B = (0, 11]$

(b)  $C = (-\infty, 2]$ ;  $D = (0, 5]$ ;  $E = (2, \infty)$

4. Three goddesses were sitting in an old Indian temple. Their names were Truth (always telling the truth), Lie (always lying) and Wisdom (sometimes lying). A visitor asked the one on the left: "Who is sitting next to you?"

"Truth," she answered.

Then he asked the one in the middle: "Who are you?"

"Wisdom."

Lastly, he asked the one on the right: "Who is your neighbor?"

"Lie," she replied.

And then it became clear who is who.