

R Notebook

```
U <- c(1,2,3,4,5,6,7,8,9,10,11,12)
A <- c(2,3,5,7,11)
B <- c(2,4,6,8,10,12)
C <- c(3,6,9,12)
```

$$A \cup B$$

```
AUB <- union(A,B)
```

$$A \cap B$$

```
AnB <- intersect(A,B)
```

$$B \cap C$$

```
BnC <- intersect(B,C)
```

$$(A \cup B) \cap C$$

```
intersect(AUB,C)
```

```
## [1] 3 6 12
```

$$(A \cap B) \cup (B \cap C)$$

```
union(AnB,BnC)
```

```
## [1] 2 6 12
```

$$(A \cup B)'$$

```
setdiff(U,AUB)
```

```
## [1] 1 9
```

$$A' \cap B'$$

```
Acomp <- setdiff(U,A)
Acomp
```

```
## [1] 1 4 6 8 9 10 12
```

```
Bcomp <- setdiff(U,B)
Bcomp
```

```
## [1] 1 3 5 7 9 11
```

```
intersect(Acomp,Bcomp)
```

```
## [1] 1 9
```