



INTRODUCTION TO R

# Subsetting Vectors

# Subset by index

```
> remain <- c(spades = 11, hearts = 12,  
              diamonds = 11, clubs = 13)
```

```
> remain[1]  
spades  
11
```

**[1] -> take element at index 1**  
**result is a (named) vector too!**

```
> remain[3]  
diamonds  
11
```

# Subset by name

```
> remain <- c(spades = 11, hearts = 12,  
              diamonds = 11, clubs = 13)
```

```
> remain["spades"]  
spades  
      11
```

```
> remain["diamonds"]  
diamonds  
       11
```

# Subset multiple elements

```
> remain <- c(spades = 11, hearts = 12,  
              diamonds = 11, clubs = 13)
```

```
> remain_black <- remain[c(1, 4)]
```

```
> remain_black  
spades  clubs  
    11    13
```

**order in selection vector matters!**

```
> remain[c(4, 1)]
```

```
clubs spades  
   13    11
```

```
> remain[c("clubs", "spades")]
```

```
clubs spades  
   13    11
```

# Subset all but some

```
> remain <- c(spades = 11, hearts = 12,  
              diamonds = 11, clubs = 13)
```

```
> remain[-1]
```

| hearts | diamonds | clubs |
|--------|----------|-------|
| 12     | 11       | 13    |

**All but index 1 are returned**

```
> remain[-c(1, 2)]
```

| diamonds | clubs |
|----------|-------|
| 11       | 13    |

```
> remain[-"spades"]
```

Error in `-"spades"` : invalid argument to unary operator

# Subset using logical vector

```
> remain <- c(spades = 11, hearts = 12,  
              diamonds = 11, clubs = 13)  
  
> remain[c(FALSE, TRUE, FALSE, TRUE)]  
hearts  clubs  
    12    13  
  
> selection_vector <- c(FALSE, TRUE, FALSE, TRUE)  
> remain[selection_vector]  
hearts  clubs  
    12    13
```

# Subset using logical vector

```
> remain <- c(spades = 11, hearts = 12,
              diamonds = 11, clubs = 13)

> remain[c(TRUE, FALSE)]
  spades diamonds
      11       11

> remain[c(TRUE, FALSE, TRUE, FALSE)]
  spades diamonds
      11       11

> remain[c(TRUE, FALSE, TRUE)]
  spades diamonds clubs
      11       11    13

> remain[c(TRUE, FALSE, TRUE, TRUE)]
  spades diamonds clubs
      11       11    13
```

**R recycles c(T, F) to c(T, F, T, F)**



INTRODUCTION TO R

**Let's practice!**