session #4 r_basics

Adrian C. Lo

4/6/2020

R as an calculator

```
7 - 5
```

```
## [1] 2
```

```
2 + 2
```

```
## [1] 4
```

```
2 * 4
```

```
## [1] 8
```

```
6 / 3
```

```
## [1] 2
```

```
3^2
```

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

Objects and basic R functions

```
temperature_today <- 22
temperature_yesterday <- 24

temperature_today - temperature_yesterday
```

```
## [1] -2
```

```
temperature_week <- c(24,22,23,30,25,10)

mean(temperature_week)
```

```
## [1] 22.33333
```

```
min(temperature_week)
```

```
## [1] 10
```

R functions

```
in_fahrenheit <- function(x) {
  (x * 1.8) + 32
}

in_fahrenheit(22)
```

```
## [1] 71.6
```

```
in_fahrenheit(c(24,22,23,30,25,10))
```

```
## [1] 75.2 71.6 73.4 86.0 77.0 50.0
```

Libraries and functions

```
# if you DO NOT have the library
# install.packages("ggplot2")

# if you have the library
library(ggplot2)

ggplot(mtcars, aes(x = hp, y = mpg)) +
  geom_point() +
  geom_smooth() +
  labs(x = "Horsepower", y = "Miles per gallon", title = "My first plot")
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```