Crash Course Mathematics

Marco Repetto

August-September, 2018

Before starting . . . Where do I find this slides?

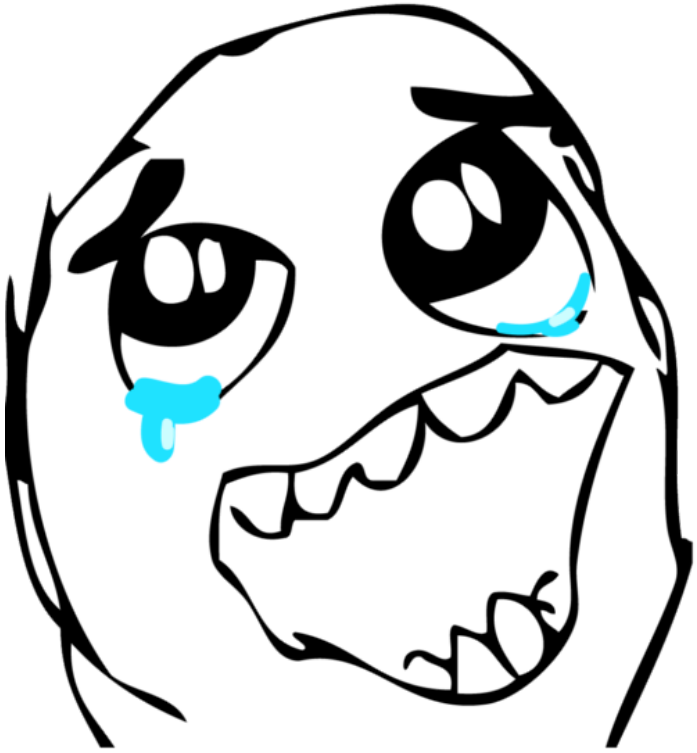

Figure 1:

Essentials of Set Theory

What is a set?

A set may be seen as a collection of elements. The following

$$S = \{a, b, c\}$$

is said to be a set. In particualr we are talking about the set S with elements a b and c.

Be carfull

The order is not important meaninig that given two vectors:

$$A = \{1, 2, 3\} \quad B = \{1, 3, 2, 1\}$$

$$A = B$$

Essentials of Set Theory II

Let's elaborate it a little more. . .

The notation we used previously usefull with short sets but what about big sets and infinite sets? We need to use a different notation defining the property of the set:

Some Aspects of Logic

- Eat eggs
- Drink coffee

Mathematical Proofs

- Eat eggs
- Drink coffee

The Real Numbers

- Eat eggs
- Drink coffee

Integer Powers

- Eat eggs
- Drink coffee

Rules of Algebra

- Turn off alarm
- Get out of bed

Fractions

- Eat eggs
- Drink coffee

Fractional Power

- Eat eggs
- Drink coffee

Inequalities

- Eat eggs
- Drink coffee

Intervals and Absolute Values

- Eat eggs
- Drink coffee

Summation

- Turn off alarm
- Get out of bed

Rules for Sums

- Eat eggs
- Drink coffee

Newton's Binomial Formula

- Eat eggs
- Drink coffee

Duble Summs

- Eat eggs
- Drink coffee

END OF CH 2

- Eat eggs
- Drink coffee

Dinner

- Eat spaghetti
- Drink wine

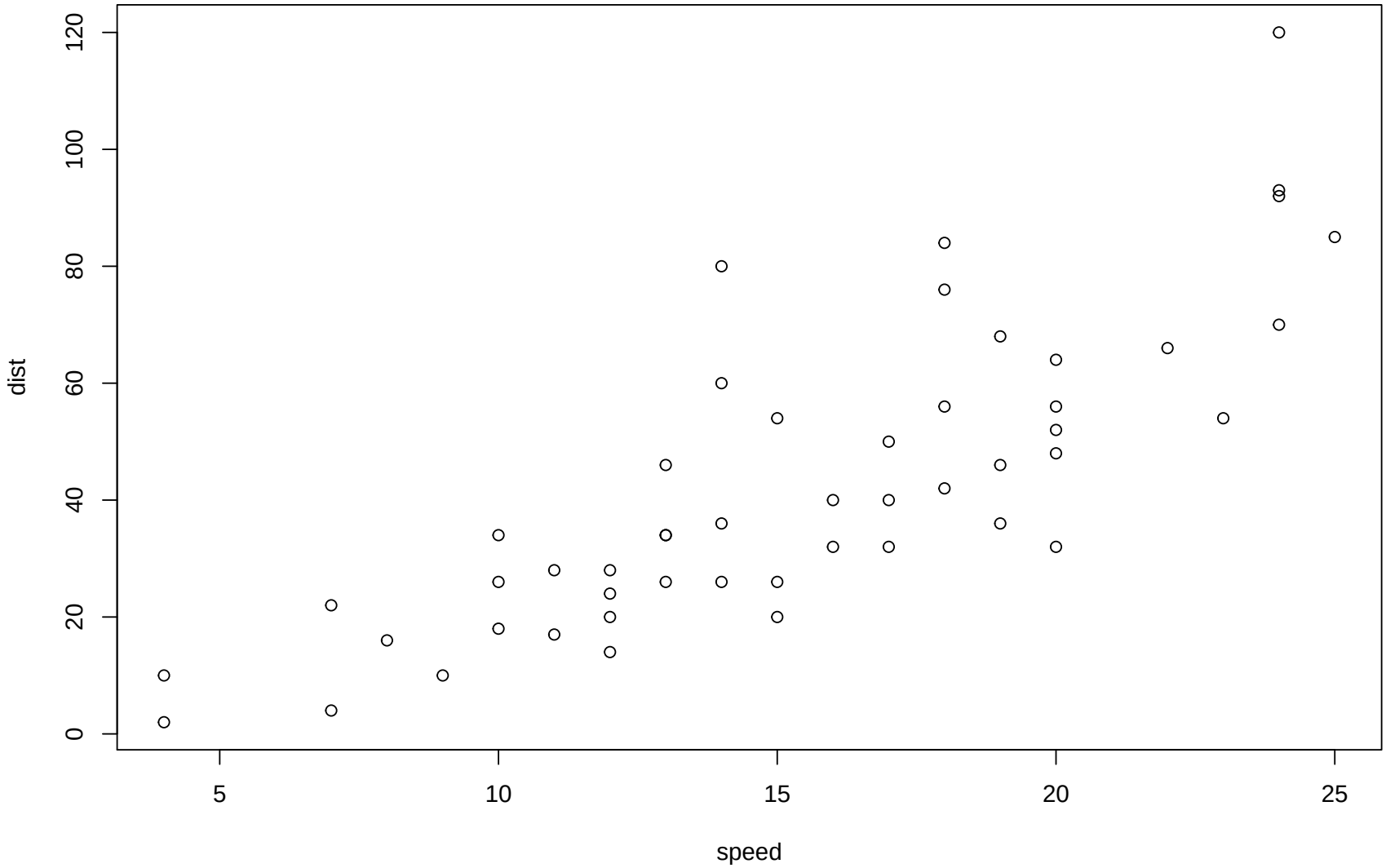

Figure 2: A scatterplot.

Going to sleep