```
rm(list=ls()); gc();  gc(); #<1>
if (!require("pacman")) install.packages("pacman") #<2>
pacman::p_load(tidyverse, magrittr,estimatr,car,modelsummary,ggrepel,patchwork) #<3>
```

①      r

②        pacman

③

## 1.

$$Y = \beta_0 + \beta_1 X_1 + ... + \beta_d X_d + \epsilon$$

OLS     $\beta$   $\hat{\beta}$    $\beta$    $X\ Y$       $\hat{\beta}$        $\beta$        $\hat{\beta}$
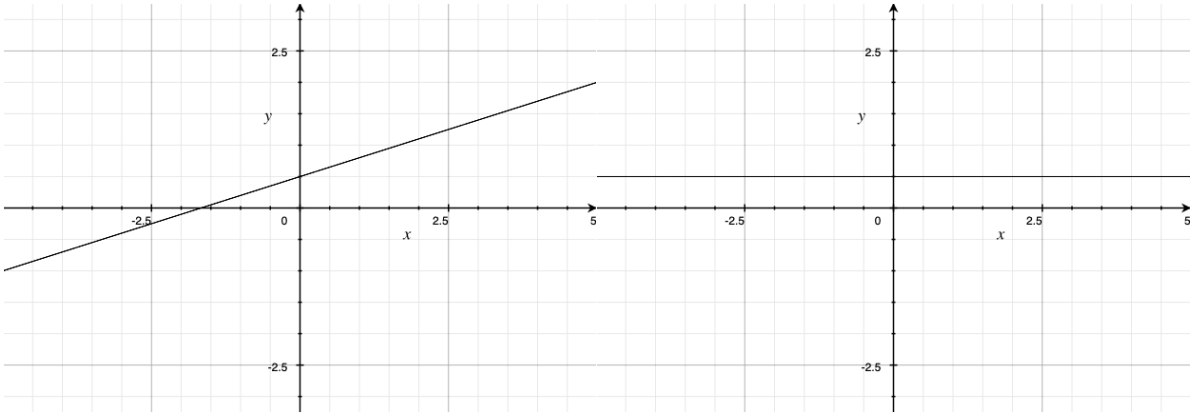
$\beta$ 0       $X\ Y$



Figure 0.1: Y X                 Figure 0.2: Y X

[1]        1/2

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