

# Supervised Learning

- Simple Linear Regression

$$y = \beta_0 + \beta_1 x$$

• Trying to learn "parameters"

- Supervised learning means we have 'labelled' data

- Multiple Linear Regression

$$y = \beta_0 + \beta_1 x_1 + \dots + \beta_n x_n$$

- Can solve linear regression "exactly" - use a formula

for  $\beta_0, \beta_1, \dots, \beta_n$

for a "cost function", which for linear regression is usually "Least Squares"