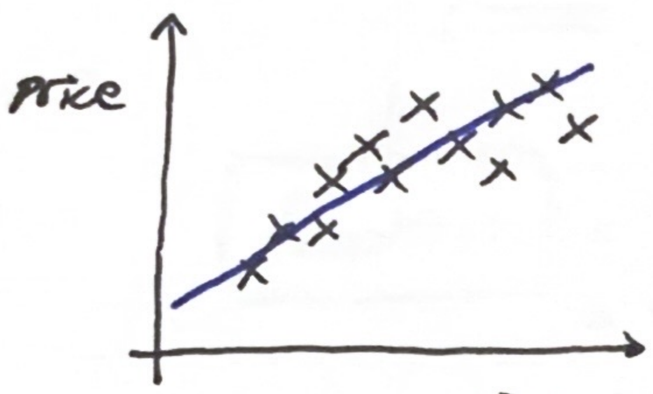
<Linear Regression>

- Regression model : predicts numbers ⟷ Classification model : predicts categories (cat or dog)
- Linear Regression model : fit a straight line to data

e.g. housing price prediction



<Terminology>

① training set : Data used to train model

<Data tabel>

(x) size in feet²	(y) price in $1000's	
(1) 2104	(1) 400	m=47
(2) 1416	(2) 232	
(3) 1534	(3) 315	
(4) 852	(4) 178	
⋮	⋮	
(47) 3210	(47) 870	

- x = "input" variable
  = "feature"
- y = "output" variable
  = "target"
- m = number of training example
- (x, y) = single training example

* To refer to a specific training example for each row of the data table

$(x^{(i)}, y^{(i)})$ = i^{th} training example

(i = refers to a specific row in the table)

ex) $(x^{(1)}, y^{(1)}) = (2104, 400)$