

3.1a Bivariate Data

2 quantitative variables

Explanatory Variable - # of letters
(x)

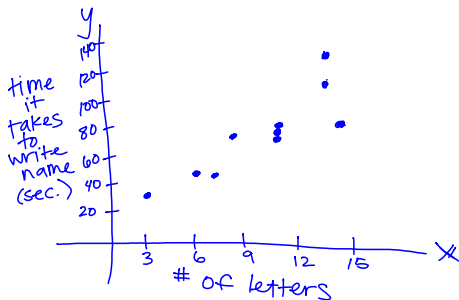
Response Variable - time it takes to write name
(y)

ex: 1) Weight of car vs. mileage
 ↓ Expl. ↓ resp.

2) influence of smoking on life expectancy
 # of cigarettes age of death

* Not necessarily cause/effect

Scatterplot: used to display bivariate data



on calc:
type in 2 lists (order matters)

L₁ - explanatory

L₂ - response

2nd → $\boxed{Y=}$ → $\boxed{\text{statplot}}$ → $\boxed{\text{L}_1}$ → $\boxed{\text{L}_2}$

graph → zoom: 9

Interpreting Scatterplots:

1. Direction

- positive → as one variable increases, the other increases
- negative → as one variable increases, the other decreases

2. Form

- linear
- curved
- cluster

3. Strength

weak Moderate Strong

4. Outliers - points that fall outside the overall pattern