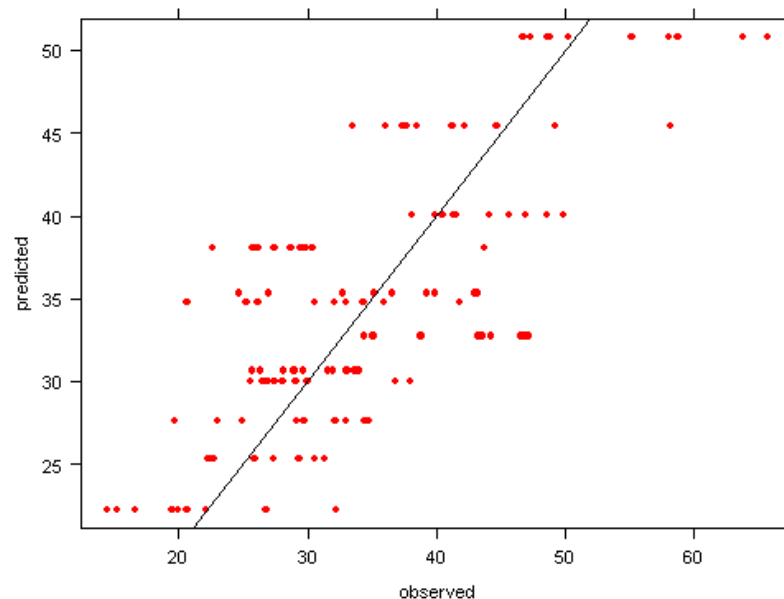


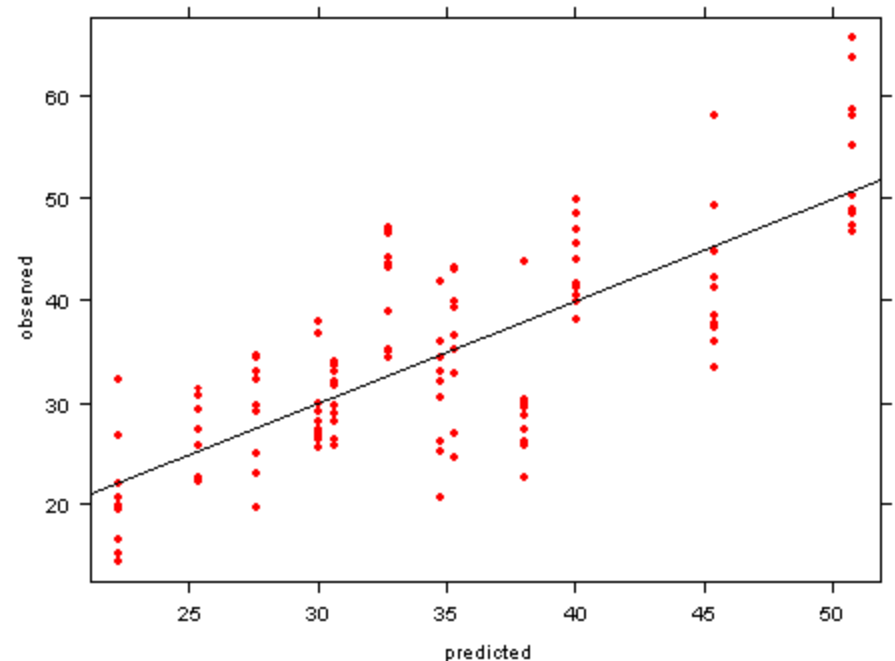
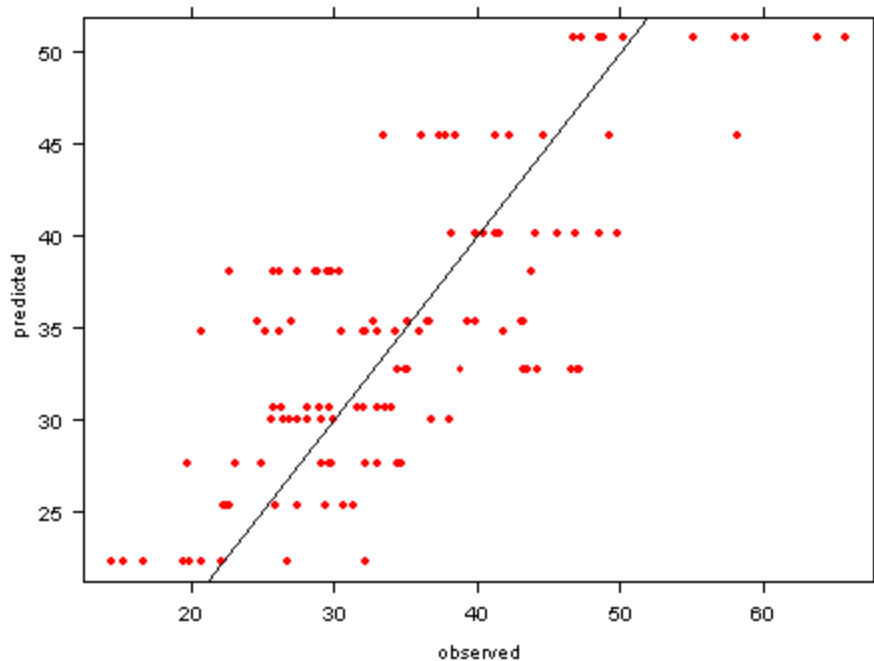
## Comparing Like with Like

- Compare two data sets,  $x$  and  $y$ , to assess if they are “similar”
- Simple: plot  $y$  against  $x$
- Can be very misleading: “suggestive”
- Example: plot predicted values ( $y$ ) versus observed values ( $x$ )
  - The line is the identity line  $y=x$



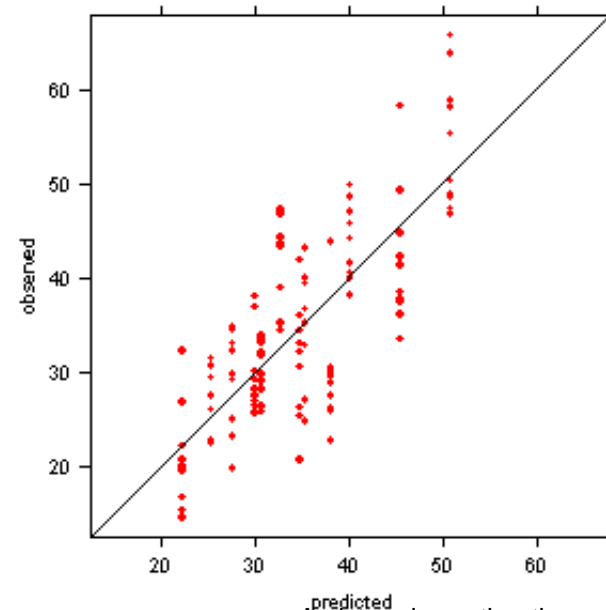
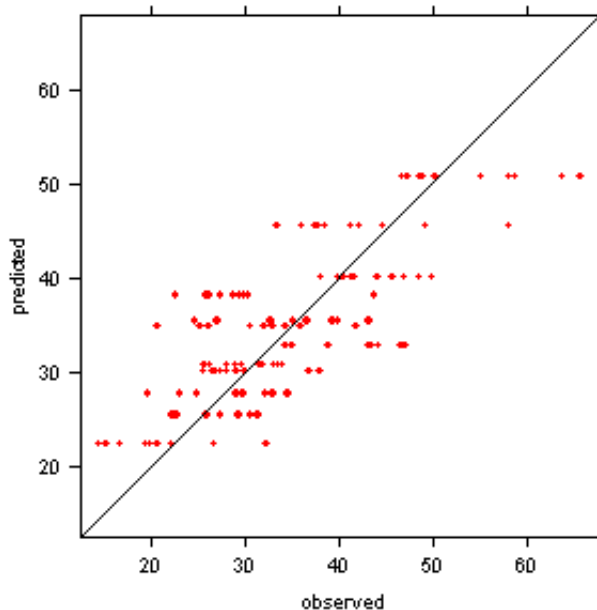
## Comparing Like with Like

- Two comparisons: Which set of (x, y) values is more similar?
- The two data sets are the same!
  - Just that x and y are swapped
- So why is the visual perception so different?



## Comparing Like with Like

- Same axis ranges
- One unit corresponds to the same number of pixels on both axes
  - The graphs are square
  - Consequence: the identity line has a 45 degree slope
- Avoids visual bias



## Change From Baseline

- Change from baseline = change from 100% or 1
- To avoid misleading visual perception, consider
  - a graph symmetric around “no change”
  - Addition of a supportive line of no change

