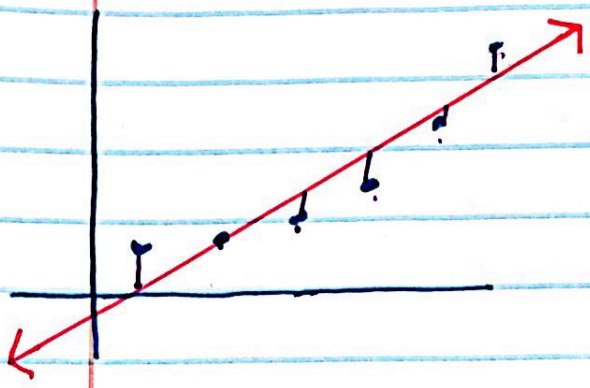
Residuals



Residual = observed y − predicted y
↑ data ↓ line

Wave Problem - Pg 4

$y = .20x + .91$

Find the residual for the 20th student

observed y = 4.56

predicted y = 4.84

$P_y = .2(20) + .91$

$= 4.91$

Residual = observed y − predicted y

$= 4.56 - 4.84$

$= -.28$

- point is below the line
- so the actual value was less than the predicted

The actual amount of time it took 20 students to complete the wave was .28 seconds less than predicted.

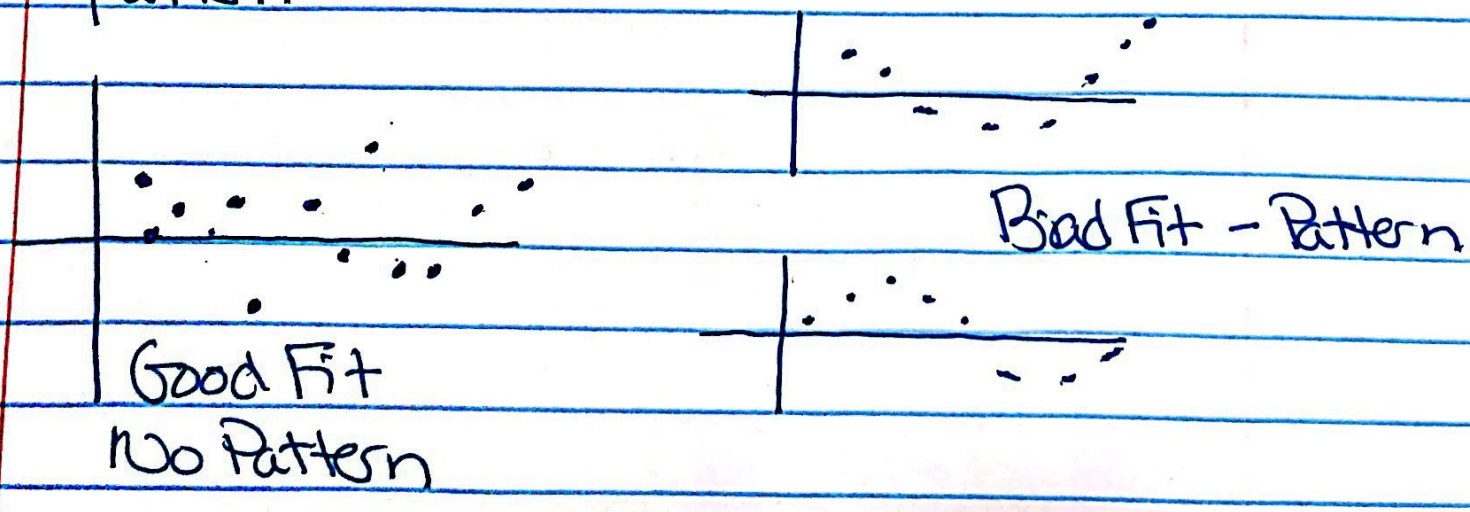
Calc - Enter data
- Run + Store the regression equation
- [stat] → Edit
- highlight L_3 [Enter]
- [2nd] [stat] → #7 (Resid)

Residual for 20 students is $\doteq .28$

View the residual plot

Calc - [2nd] [y=]
- Pick Plot #2
- Ylist
- [2nd] [Stat]
- #7 (Resid)
- Zoom 9

Look for the residual plot not to have a pattern.



Apple Problem Pg 9

$y = .02x + .56$

Residual for 1983 = $-.08$

$-.0848$

The actual price of a pound of apples was $0.08 less than predicted.

No Pattern - Good Fit

Hw Pg 10 #3 + 4
Pg 11-12