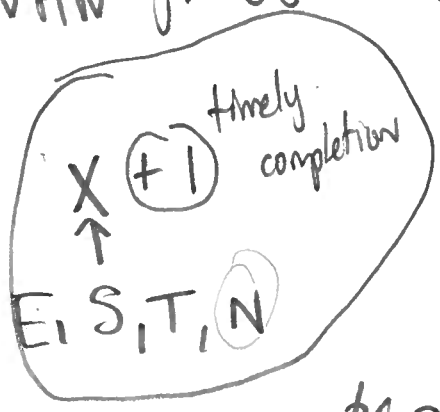
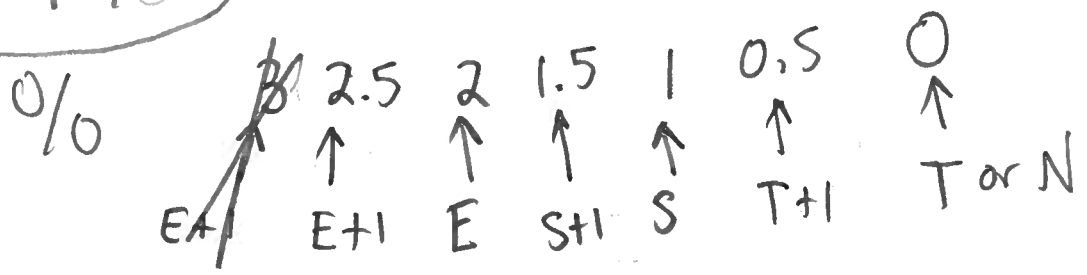
WHW grades → Blackboard

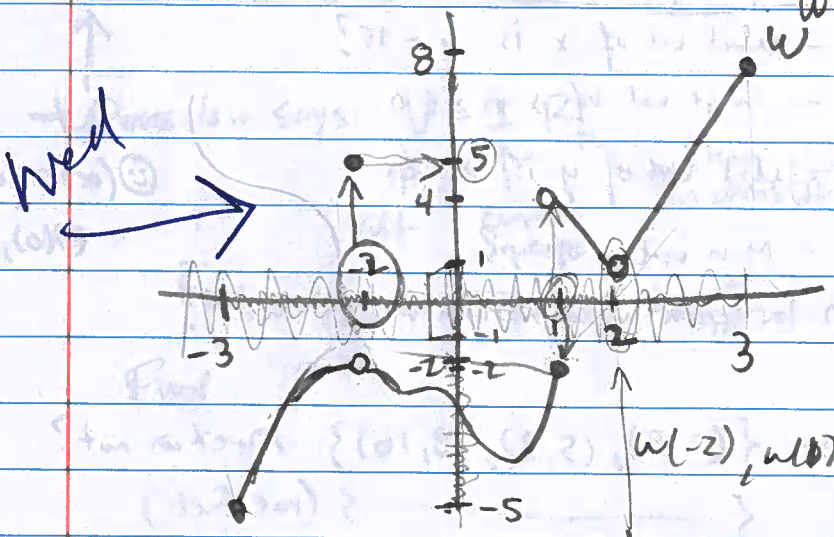




FRIDAY

NO sychronous class meeting

Bedlewo



range = $[-5,-2] \cup (1,8$

$w(-2) = 5$

$w(1) = -2$

domain = $[-3,2) \cup (2,3$

$= [-3,3] \setminus \{2\}$

= "all numbers b/w -3 & 3, including -3, 3 but not 2"

$w(-2), w(1), w(2)$

not in domain $w(2) =$ undef

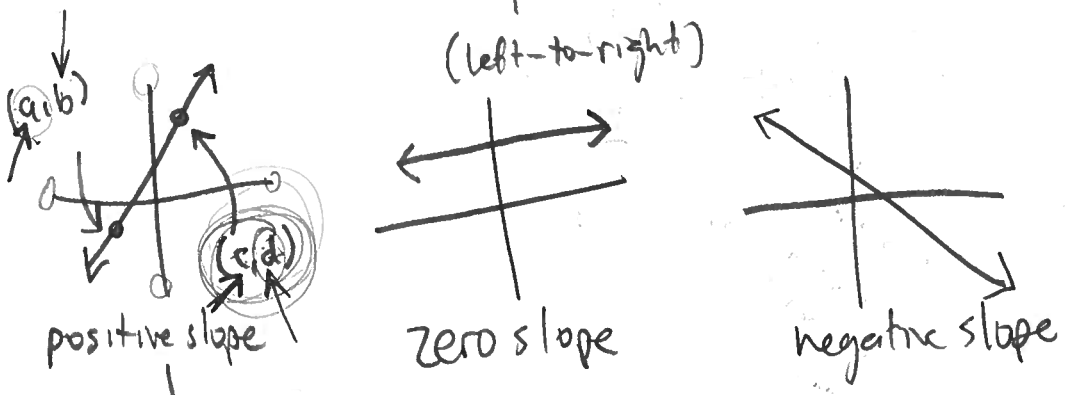
Linear functions & slope

data suggesting ↑ is this a line?

x	y	
10	52	→ (10,52) = A
25	127	→ (25,127) = B
37	187	→ (37,187) = C
52	262	→ (52,262) = D

plot → can't tell — maybe it is!

Slope — number that characterizes how steep a line is (left-to-right)



$$\text{slope} = \frac{d-b}{c-a} = \frac{\text{"rise"}}{\text{"run"}} = \frac{\Delta y}{\Delta x}$$

Δy ← "change in y"

Δx ← "change in x"

~~Δ - "delta"~~

Δ - "capital delta"

∫ - "lowercase delta"

FACT: no matter what two points on a line are picked — the slope is always the same!!

Slope using...

A, B → $\frac{127-52}{25-10} = \frac{75}{15} = 5$

B, C → $\frac{187-127}{37-25} = \frac{60}{12}$

C, D → $\frac{262-187}{52-37} = \frac{75}{15} = 5$

$\frac{60}{12} = 5$

127 − 52 = 75

187 − 127 = 60 ; 37 − 25 = 12

262 − 187 = 75 ; 52 − 37 = 15

⇒ Conclusion: this data lies on a line!!