9-26-05

Labs on Friday

Lab B due this Friday (9-30).

Lab C - start then, too.

Test Fri Review Weds

Sample Tests on line

HW Both Ch 3 Templates

Due Friday.

Moodle All Readings

Questions open til Weds

Ch 3 Instead of Method 2

Use Excel instead to generate exponential regression formulas

Test:

- Some Multiple Choice Questions ~ $\frac{1}{3}$ exam
- Rough / Ready linear / exponential model
- Models from Verbal descriptions
- Some Excel formulas
- Why a model is good/not with justification.

Lab D p 299

Moving Average: make jumpy data smooth.

C21: 3 days of day centered on t=0

y from t: −1 0 1
center

$$M.A. = \frac{32 + 37 + 42}{3}$$

Excel = average (B20 : B22)

D21: (15 days vs 3 days)
7 bef/7 aft

= average (B14 : B28)

E31: (trailing vs centered)
Most recent+back 3days
Most recent

= average (B29 : B31)

F31:
15 days back
Most recent

= average (B17 : B31)

Chapter 5

Last Time:

Malthus
1. Population Exponentia
2. Food Prod. Linear
3. Population would outstrip Food Supply

Doom · Gloom

1. Held for US pop ≈ 1790-186
2. Not hold - Food production out paced population
3. Food was abundant at the end of the 19th century

Food Production.

Since 1900 - Less New land avail
technology - Tractors/machines
- Herbicides/Fertilizers

Population:

p 92 ff

US Pop	1962	1.5 % growth rate
	1998	.8 % " "
Great Britain	1962	.9 % growth rate
	1998	.34 %
Mexico	1962	3.3 %
	1998	1.6 %
Sri Lanka	1962	2.4 %
	1998	1 %

Why does the same drop in growth rate seem to happen in each country?

Stay tuned to Chapter 6.

p 99

Food Data

- Moving average to smooth data - Look for trends

- <u>Indexing</u> p 100

-Fix one year as base

-Compare other years to that

Sri Lanka Rice Production

yr	prod.	Avg prod 89-91	Indexed Production
88	2476613		
89	2063437		
1990	2,538,000	2,330,146	* 108.9
91	2389000		
92	2339000		

* Compare 1990 prod to 89-91 average

$$= \frac{2538000}{2330146} \times 100 = 108.9$$

index > 100 means 1990 prod > 7 base years' production

index < 100 means given yr's prod < base yrs' producti

Excess over 100 = % increase in given yr compared to base.