Ec. 162 Current 5-90

Mon, 21 May 90

1. "One Hoss Shay" $\frac{1 - I^{-n}}{i}$

2. Decay, $I^{-1} + (1-d)I^{-2} + \dots + (1-d)^{(n-1)}(I^{-n})$

$$\cong \frac{1 - (I+d)^{-n}}{i+d}$$

3. Inf. series

$$V \cong \frac{a}{i+d}$$

$a - Vi = Vd$ = + cash flow = KCA

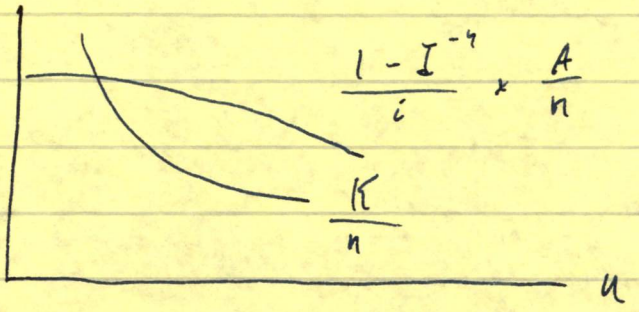
4. Local obsolescence.
Land under K rises. Does buyer pay for underdurable bldg?
both land + undeprec. bldg. — No.
Rising L.V. swallows bldg. value.
"Bldg - resid." method.

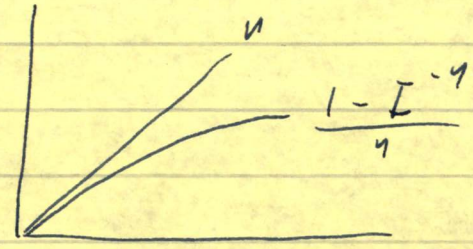
Wed.

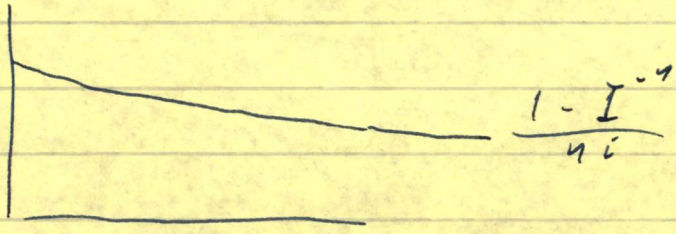
5. Depln.

6. PV of SL deprecn. $\frac{K_0}{n} + \frac{1 - I^{-n}}{i} = +K_0 \frac{1 - I^{-n}}{ni}$

7. PV of finite flow whose CF falls in st-line is PV of ∞ const. flow less . . . ?







CF =

Table 1: Effects of values of n and i on ratio of DCF-method Costs per Ton to LCF-method Costs per Ton.

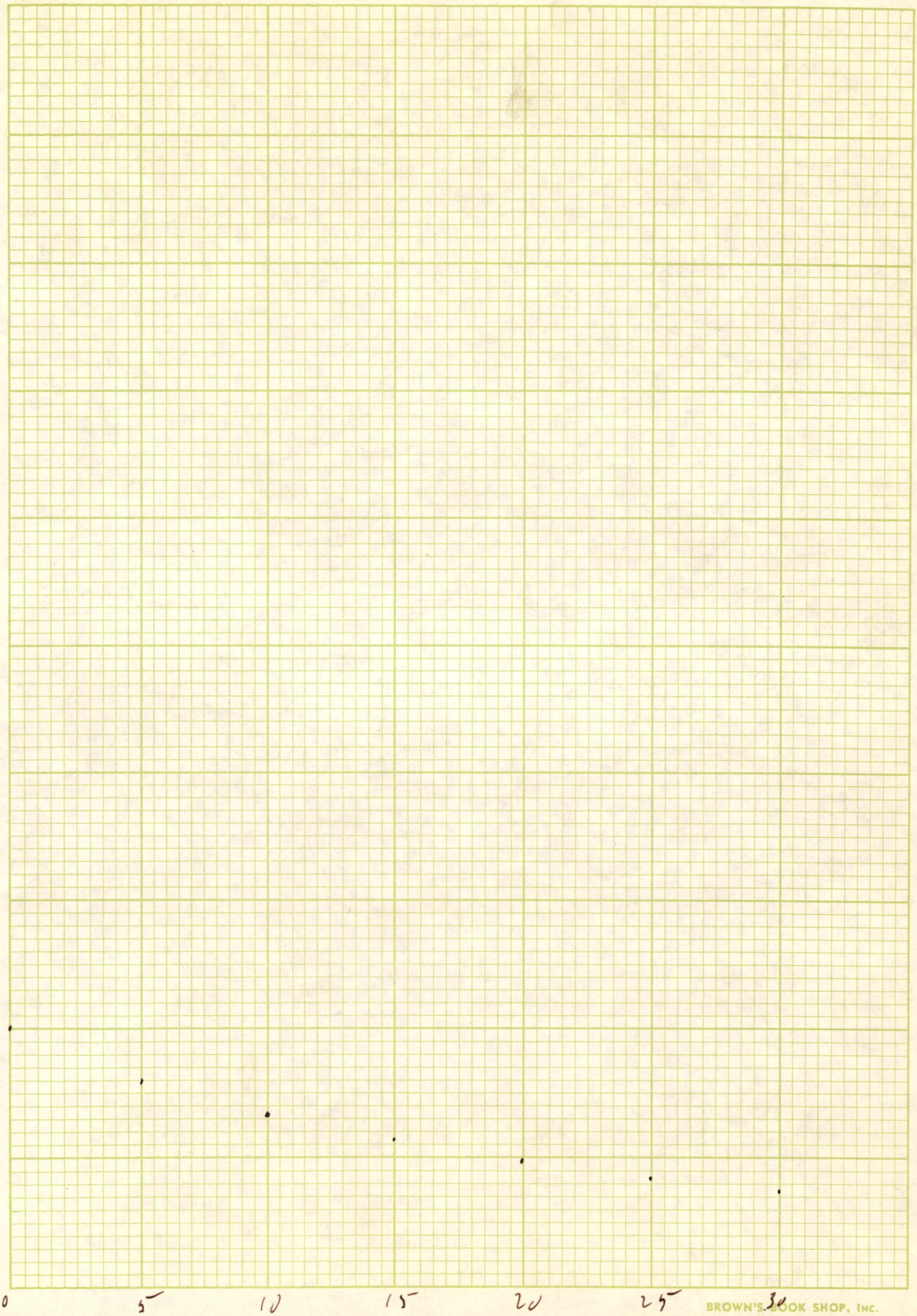
The ratio is: $\frac{\text{DCF Method}}{\text{LCF Method}} = \frac{1 - I^{-n}}{ni}$

n ↓	i :→ .02	.04	.08	.16
5	.94	.89	.80	.65
10	.90	.81	.67	.48
15	.86	.74	.57	.37
20	.82	.68	.49	.30
25	.78	.62	.43	.24
30	.75	.58	.38	.21

Table 1 reconfirms the numerical example given you last Thursday. There, LCF Cost per Ton is .64, and DCF Cost per Ton is .33, or 52% of .64.

Likewise, $\frac{1 - 1.08^{-18}}{18 \times .08} = .52$

A "capital-intensive" method is one that raises K_0, for the payoffs of a) Lowering E, or b) Raising n, or c) Raising T/n, or any combination. Usually it is a combination. Usually raising n is a major factor; hence the bias.



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