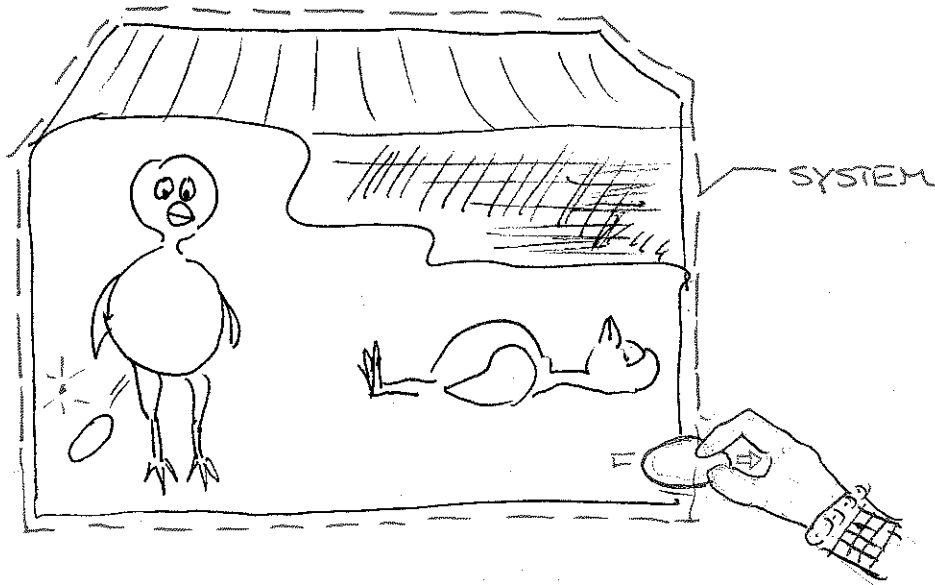


22-141 50 SHEETS
 22-142 100 SHEETS
 22-144 200 SHEETS

CAMPAL

- Betty Sue is taking eggs out of a hen house at a rate of one egg per minute. The hen house contains two hens. One is a genetically enhanced super-hen and is laying eggs at a rate of 80 eggs per hour. The other hen, living in the shadow of the super-hen, is depressed and therefore sleeping. What is the rate of egg accumulation in the hen house?



Accounting of eggs →

$$\frac{d}{dt} (\text{EGGS})_{\text{SYS}} = \sum \text{EGGS}_{\text{IN}} - \sum \text{EGGS}_{\text{OUT}} + \text{EGGS}_{\text{GEN}} - \text{EGGS}_{\text{CON}}$$

$$= - 1 \frac{\text{EGGS}}{\text{MIN}} + 80 \frac{\text{EGGS}}{\text{HR}}$$

$$= - 1 \frac{\text{EGGS}}{\text{MIN}} \left\langle \frac{60 \text{ MIN}}{\text{HR}} \right\rangle + "$$

$$= \boxed{20 \frac{\text{EGGS}}{\text{HR}}}$$