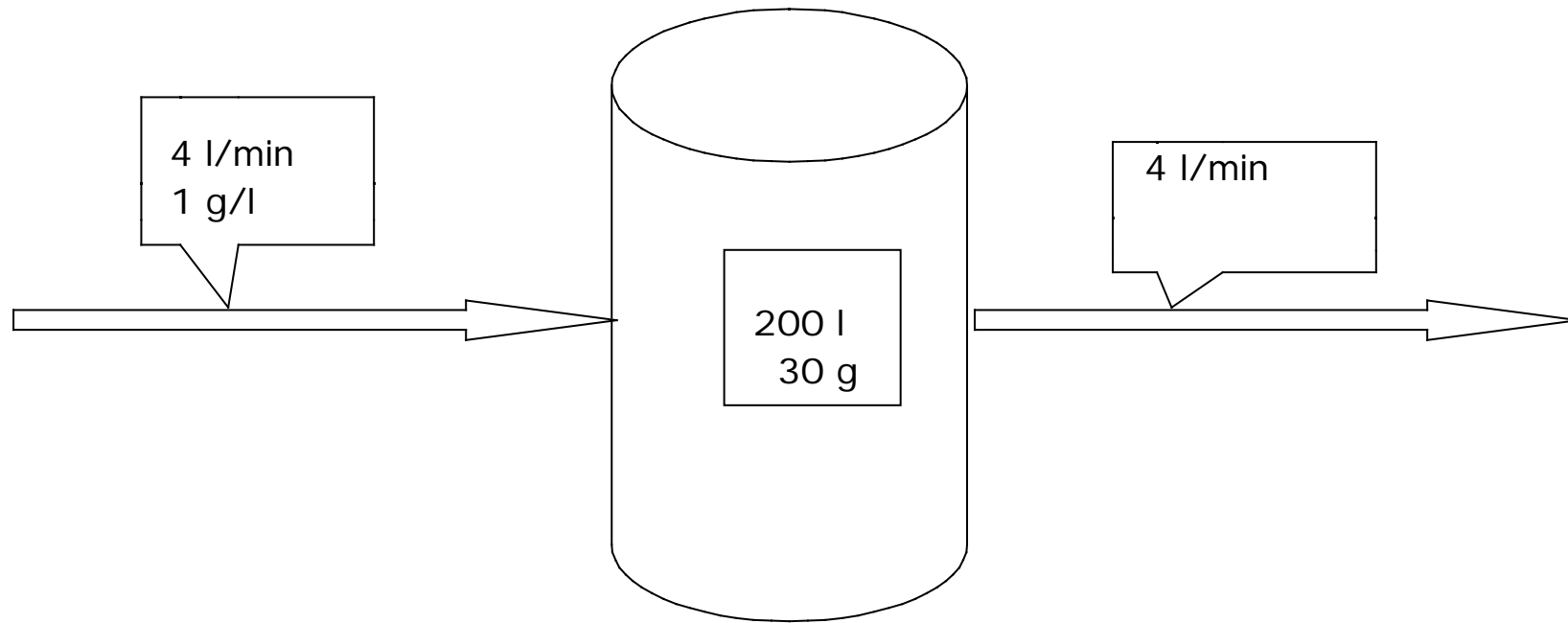


Z.C.3.1.17.



$A(t)$  är antalet gram salt i tanken vid tiden  $t$ .

$$\frac{dA}{dt} \text{ g/min} = 4 \text{ l/min} * 1 \text{ g/l} - 4 \text{ l/min} \frac{A(t)}{200} \text{ g/l}$$

$$\frac{dA}{dt} + \frac{A(t)}{50} = 4$$

$$A_h = Ce^{-\frac{t}{50}}$$

$$A_p = 200$$

$$A = Ce^{-\frac{t}{50}} + 200$$

$$30 = A(0) = C + 200, \quad C = -170$$

$$A(t) = 200 - 170e^{-\frac{t}{50}}$$