

Oef18 p A.18

geg:  $D = 75$

$T = 1 \text{ maand} = 30 \text{ dagen}$

$C_2 = 0,05 \cdot 30$   
 $= 1,5$

$k = 15 \cdot 30 = 450$

$C_1 = 7,50$

→ continue model

(a)  $K(q) = \text{Bestelkosten} + \text{beheerskosten}$   
 $\text{productie}$   
 $= 7,50 \cdot \frac{75}{q} + 1,5 \frac{q}{2} \left(1 - \frac{D}{k}\right)$   
 $= \frac{562,50}{q} + 0,75 \left(1 - \frac{75}{450}\right) q$

$K(q) = \frac{562,50}{q} + \frac{5}{8} q$

(b)  $q_0$  ?  $K$  min

$K'(q) = 0 \Leftrightarrow -\frac{562,50}{q^2} + \frac{5}{8} = 0$

$\Leftrightarrow q_0 = 30$

prod. periode =  $\frac{q_0 T}{k} = \frac{30 \cdot 30}{450} = 2 \text{ dagen}$

(c)  $q_{\text{max}} = q_0 \left(1 - \frac{D}{k}\right) = 30 \left(1 - \frac{75}{450}\right) = 30 \cdot \frac{5}{6} = 25$

(d)  $K_{\text{min}} = K(q_0) = \frac{562,50}{30} + \frac{5}{8} \cdot 30$   
 $= \frac{75}{4} + \frac{75}{4} = \frac{75}{2} = 37,5$