1. $APL = \frac{Q}{L}$

$APk = Q/k$

$MPL = \frac{\Delta Q}{\Delta L}$

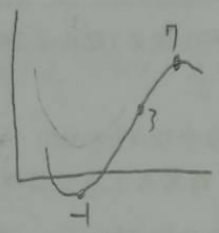
k	L	Q	APL	APk	MPL
20	0	0	0	0	0
20	5	20	4	1	4
20	10	43	4.3	2.15	4.6
20	15	57	3.8	2.85	2.8
20	20	67	3.35	3.35	2
20	25	75	3	3.75	1.6

2. $q = 21L + 9L^2 - L^3$

$\Rightarrow 21 + 18L - 3L^2$ $\quad 18 - 6L \Rightarrow L = 3$

$\Rightarrow (3L+3)(-L+7)$

$L = -1$ or 7



A:	(A)	(B)	(C)
	7	7	3

3. $L = 10$, $k = J$, $MPL = 5$, $q = 500$

$\frac{MPL}{L} = \frac{MPk}{k} \Rightarrow MPk = 2.5$ ※

4. (A) $5A + 10B = 9$ ※

(B) $L = 2$ ※

$k = 1$ ※