

1.

K	L	q	APL	APK	MPL
20	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.

$$(A) MP_L = 21 + 18L - 3L^2$$

$$\rightarrow \frac{dMP_L}{dL} = 18 - 6L = 0, L = 3$$

$$(B) \hat{=} MP_L = 0 \rightarrow L = 7$$

$$(C) AP_L = 21 + 9L - L^2 \rightarrow \frac{dAP_L}{dL} = 9 - 2L = 0$$

$$L = 4.5$$

3.

$$500 = 10 \times 5 + 5 \times MP_K \rightarrow MP_K = 90$$

$$4. (A) q = 5A + 10B$$

$$(B) q = \min\left\{\frac{L}{2}, K\right\}$$