

A108260103

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1.

K	L	q	APL	APK	MPL
20	0	0			
20	5	20	4	1	20
20	10	43	4.3	2.15	23
20	15	57	3.8	2.85	14
20	20	67	3.35	3.35	10
20	25	75	3	3.75	8

$$\begin{aligned}
 & - \begin{cases} APL \cdot q \div L = 20 \div 5 \\ APL = 20 \div 20 = 1 \\ MPL \cdot \Delta q \div \Delta L = 20 \div 5 = 4 \\ \quad \quad \quad = 23 \div 5 = 4.6 \\ \quad \quad \quad \vdots \end{cases}
 \end{aligned}$$

2. (A) L 大於多少, MPL 開始遞減?

$$MPL = 21 + 18L - 3L^2, 21 + 18L - 3L^2 < 0, (-3L - 3)(L - 7) < 0$$

$$\rightarrow L > -1$$

(B) L 等於多少時, TP 達最大?

(1) L 大於多少時, APL 開始遞減

$$APL = 21 + 9L - L^2, 21 + 9L - L^2 < 0$$

$$APL = 500 \div 10 = 50$$

$$MPL = 50 \div 10 = 5$$

$$APK = 500 \div 5 = 100$$

$$MPK = 100 \div 5 = 20$$

4.

$$(A) Q = 3L + 10K$$

(B)

$$Q = \min \left[\frac{L}{2}, \frac{K}{1} \right]$$