個體

2. $w=r=1 \rightarrow C=wK+rL \rightarrow C=K+L \rightarrow m=1$

	$q=10L^{0.5}K^{0.5}$	$q=2L+K$	$q=\min[2L,K]$	$q=\max[2L,K]$
TC	0.24	0.54	1.54	0.54
AC	0.2	0.5	1.5	0.5
MC	0.2	0.5	1.5	0.5
			$2L=K$	$2L=K$
			$\frac{L}{K}=\frac{1}{2} \rightarrow L(\min)$	$\frac{L}{K}=\frac{1}{2} \rightarrow K(\max)$

3. $A=q=\min[\frac{L}{2},\frac{K}{4}]$, $40=1K+2L \rightarrow K_A^*=20, L_A^*=10$
$B=q=\min[\frac{L}{4},\frac{K}{2}]$, $100=1K+2L \rightarrow K_B^*=20, L_B^*=40$

$\begin{cases} q=\frac{L}{2}=\frac{K}{4} \\ 2K+L=C_A \end{cases} \rightarrow \begin{cases} K_A^*=4q \\ L_A^*=2q \end{cases}$, $\begin{cases} q=\frac{L}{4}=\frac{K}{2} \\ 2K+L=C_B \end{cases} \rightarrow \begin{cases} K_B^*=2q \\ L_B^*=4q \end{cases}$

(A) $TC_A=10q+40$; $TC_B=8q+100$

(B) A $\Rightarrow 10\times20+40=400=TC_A$
B $\Rightarrow 8\times20+100=800=TC_B$
因 $TC_A<TC_B$ 故購買技術A

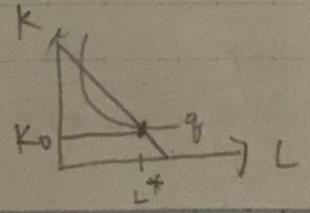
(C) A $\Rightarrow 10\times40+40=440$
B $\Rightarrow 8\times40+100=420$
因 $C_A>C_B$ 故購買技術B

(D) $TC_A<TC_B \rightarrow 10q+40<8q+100 \rightarrow 2q<60$
$\rightarrow q<30$，故 $q\leq30$ 時應買A

4. $q=10L^{0.5}K^{0.5} \rightarrow L=\frac{q^2}{100K}$, $w=r=10$

(A) $SC=10L+10\bar{K}_0=\frac{q^2}{10\bar{K}_0}+10\bar{K}_0$
$VC=wL=\frac{q^2}{10\bar{K}_0}$
$MC=\frac{\Delta STC}{\Delta q}=\frac{\Delta TVC}{\Delta q}=\frac{d}{dq}(\frac{q^2}{10\bar{K}_0})=\frac{2q}{10\bar{K}_0}=\frac{q}{5\bar{K}_0}$ *

(B) $STC=TVC+TFC=wL+r\bar{K}_0$



$\frac{dSTC}{dK}=\frac{-q^2}{10K^2}+10=0 \rightarrow \bar{K}_0=\frac{q}{10}$
$\rightarrow STC=2q$