

	① $q = 5LK$	② $q = 2LK$	③ $q = \min\{L, K\}$	④ $q = (0.2L^{0.5} + 0.8K^{0.5})^2$
7 生产函数				
α 边际产量 (MP)	$5K$	$2L$	$MP_L = 0$ $MP_K = 0$	$MP_L = -2[0.2L^{-0.5} + 0.8K^{-0.5}] \cdot 0.1L^{0.5}$ $MP_K = -2[0.2L^{-0.5} + 0.8K^{-0.5}] \cdot 0.4K^{0.5}$
β 边际技术替代率 (MRTS)	$1/2$	$2/3$	$MRTS = 0$	$MRTS = \frac{MP_L}{MP_K} = \frac{0.1L^{0.5}}{0.4K^{0.5}} = \frac{1}{4}(\frac{L}{K})^{0.5}$
γ 替代弹性			固定	递减
δ 规模报酬	递增	固定	固定	
ε 产量弹性	$E_L = 1$ $E_K = 1$	$E_L = \frac{2}{3}$ $E_K = \frac{2}{3}$	$E_L = 0$ $E_K = 0$	
ζ 生产弹性	$E = E_L + E_K = 2$	$E = \frac{2}{3} + \frac{2}{3} = \frac{4}{3}$	$E = 0$	
η 替代弹性	1	∞	无弹性	

① $MP_L = \frac{TP}{L} = 5 \cdot \frac{K}{L} = 5 \cdot \frac{K}{L}$, $MP_K = 5 \cdot \frac{L}{K}$, $AP_L = 5K$, $AP_K = 5L$

② $f(L, K) = 5LK$
 $= 5nLK > nq = 5nLK \Rightarrow$ 递增

③ $\frac{MP_L}{MP_K} = \frac{5K}{5L} = \frac{K}{L} = MRTS$

④ 替代弹性: $\frac{d \ln(K/L)}{d \ln MRTS} = \frac{d \ln(K/L)}{d \ln(K/L)} = 1$

⑤ $E_L = \frac{d \ln q}{d \ln L} = \frac{d q / q}{d L / L} = \frac{L / q}{1 / q} = \frac{MP_L}{AP_L} = \frac{5K}{5K} = 1$

$E_K = \frac{MP_K}{AP_K} = \frac{5L}{5L} = 1$

⑥ $E = E_L + E_K = 2 > 1 \Rightarrow$ 规模递增