

1. (1) $MRS = -\frac{2Y}{X} = -\frac{PX}{PY} = -\frac{10}{20}$ $Wage \uparrow$ $(C_{100}) =$
 $X = 4Y$

(2) $Y = \frac{1}{2}C_{100} = 10X + 20Y = 100$
 $10X + 20\left(\frac{1}{2}X\right) = 100$
 $15X = 100$
 $X = \frac{100}{15}$

(3) $MRS_{XY} = -\frac{2Y}{X} = -\frac{PX}{PY} = -\frac{10}{20}$
 $Y = \frac{1}{2}X$

$500 = 10X + 20\left(\frac{1}{2}X\right)$
 $\frac{3}{2}PX = 100$
 $1.5X = 100 \times \frac{2}{3} = 200$
 $X = 200 \times \frac{2}{3}$

(4) 由所有生产要素投入量按相同比例增加时，产出增加的比例：
 由要素投入量增加比例 = 产出增加比例