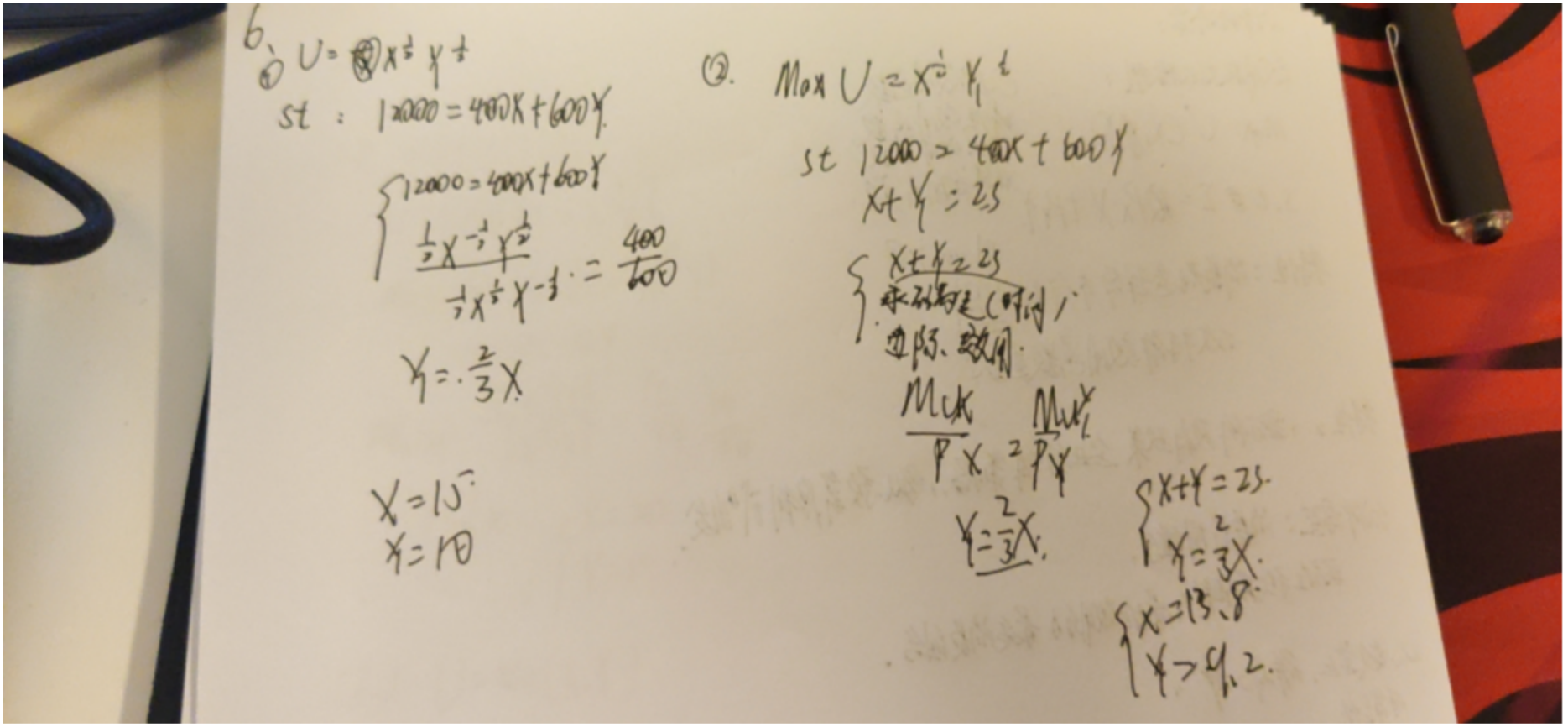
6、
① $U = X^{\frac{1}{2}} Y^{\frac{1}{2}}$
st : $12000 = 400X + 600Y$
$\begin{cases} 12000 = 400X + 600Y \\ \frac{\frac{1}{2}X^{-\frac{1}{2}}Y^{\frac{1}{2}}}{\frac{1}{2}X^{\frac{1}{2}}Y^{-\frac{1}{2}}} = \frac{400}{600} \end{cases}$
$Y = \frac{2}{3}X$
$X = 15$
$Y = 10$
② $\max U = X^{\frac{1}{2}} Y^{\frac{1}{2}}$
st $12000 = 400X + 600Y$
$X + Y = 25$
$\begin{cases} X + Y = 25 \\ \text{求边际替代率（时间）} \\ \text{边际效用} \end{cases}$
$\frac{MU_X}{P_X} = \frac{MU_Y}{P_Y}$
$Y = \frac{2}{3}X$
$\begin{cases} X + Y = 25 \\ Y = \frac{2}{3}X \end{cases}$
$\begin{cases} X = 13.8 \\ Y > 9.2 \end{cases}$