

(3) 
$$-X_1 + Y_2 + 2X_3 > max$$
  
 $\int -SX_1 - X_2 + 2X_3 \geq 5$   
 $X_1 - 3X_3 = 3$   
 $X_1 + 2X_2 \geq 2$   
 $X_1 \geq 0$ ,  $X_3 \geq 0$ 

(5) 
$$24_1-x_2+x_3 \Rightarrow min$$
  

$$\begin{cases} x_1+2x_2-x_3 \in 5\\ 2x_1-4x_2+3x_3 \geq 3\\ x_1 > 0, x_2 \geq 0 \end{cases}$$

 $\begin{cases} x_1 + x_2 - 5x_3 \Rightarrow max \\ x_1 - 2x_2 + 4x_3 \ge 6 \\ x_1 + 3x_3 \le 3 \\ x_1 + 2x_2 = 2 \\ x_1 \le 5 \\ x_1 \ge 0, x_2 \ge 0 \end{cases}$ 

(3)  $19x_1 + 21x_2 \Rightarrow min$   $\int 2x_1 + 5x_2 \ge 20$   $4x_1 + x_2 \ge 20$   $x_1 \ge 0, x_2 \ge 0$ 

2  $2x_1 + x_2 - 3x_3 - 5x_4 \Rightarrow ma$   $\int x_1 + x_2 + 2x_3 - x_4 \leq 9$   $\int 3x_1 - x_2 + x_3 + 2x_4 = 9$   $x_1 + 2x_2 - x_3 + x_4 \geq 2$  $x_1 \geq 0, x_3 \geq 0, x_4 \geq 0$ 

(4)  $2x_1 - x_2 + x_3 \Rightarrow min$  $\begin{cases}
7 + x_1 - x_2 + x_3 & = 7 \\
8x_1 + x_3 & = 5
\end{cases}$   $\begin{cases}
x_1 - 2x_2 & = 3 \\
x_1 & = 0, x_2 & = 0
\end{cases}$ 

6  $X_1 + 2X_2 \rightarrow max$   $5^{2}X_1 - 2X_2 \leq 9$   $X_1 - 2X_2 \geq 9$   $X_1 + Y_2 \leq 9$   $X_1 + Y_2 \leq 9$  $X_1 \neq 0, X_2 \geq 0$ 

(3)  $x_1 - x_2 - 2x_3 \Rightarrow min$  $\begin{cases} x_1 - 2x_2 + 4x_3 \ge 6 \\ y_1 + 3x_3 \le 3 \\ y_1 + 2x_2 = 2 \\ y_1 \le 2 \\ y_1 \ge 0, x_3 \ge 0 \end{cases}$ 

 $2x_{1} - x_{2} - x_{3} \Rightarrow max$  40  $7x_{1} - x_{2} + x_{3} \in 7$   $8x_{1} + x_{3} = 5$   $x_{1} - 2x_{2} \ge 3$   $x_{2} \le 7$   $x_{1} \ge 0$ ,  $x_{2} \ge 0$