

2	20
3	80
5	50

$$C=16$$

	1	2	3	4	5	$\Sigma$
2	8	0	0	0	2	24
3	0	5	0	2	4	82
5	0	0	3	2	0	50
	1			25	8	

$$34 \text{ dk}$$

$$\textcircled{6} \text{ BV} = \{1, 2, 3\}$$

$$B^{-1} = \begin{bmatrix} 1/8 & & \\ & 1/5 & \\ & & 1/3 \end{bmatrix}$$

$$\Pi = [1/8, 1/5, 1/3]$$

$$\begin{cases} 2a_1 + 3a_2 + 5a_3 \leq 16 \\ \frac{1}{8}a_1 + \frac{1}{5}a_2 + \frac{1}{3}a_3 - 1 \rightarrow \text{ex} \\ a_i \geq 0, \text{int} \end{cases}$$

$$\frac{1}{16} \quad \frac{1}{15} \quad \frac{1}{15}$$

$$\rightarrow (0, 2, 2) \quad z = \frac{2}{5} + \frac{2}{3} - 1 > 0$$

$$B^{-1} = \begin{bmatrix} 1/8 & & \\ & 1/5 & \\ & & 1/3 \end{bmatrix} \begin{bmatrix} 20 & 0 \\ 80 & 2 \\ 50 & 2 \end{bmatrix} \begin{bmatrix} 20/8 & 0 \\ 16 & 2/5 \\ 50/3 & 2/3 \end{bmatrix}$$

$$\min \left\{ \frac{16}{2/5}, \frac{50/3}{2/3} \right\} \quad \frac{40}{25}$$

$$a_4 \rightarrow B \rightarrow a_3$$

$$\textcircled{7} \text{ BV} = \{1, 2, 4\}$$

$$B^{-1} = \begin{bmatrix} 1/8 & 0 & 0 \\ 0 & 1/5 & -1/5 \\ 0 & 0 & 1/2 \end{bmatrix}$$

$$\Pi = [1/8, 1/5, 3/10]$$

$$\begin{cases} 2a_1 + 3a_2 + 5a_3 \leq 16 \\ a_i \geq 0, \text{int} \\ \frac{1}{8}a_1 + \frac{1}{5}a_2 + \frac{3}{10}a_3 - 1 \rightarrow \text{ex} \end{cases}$$

$$\frac{1}{16} \quad \frac{1}{15} \quad \frac{3}{50}$$

$$(2, 4, 0)$$

$$z = \frac{2}{8} + \frac{4}{5} - 1 > 0$$

$$a_5 \rightarrow B \rightarrow a_2$$

$$\begin{bmatrix} 1/8 & 0 & 0 \\ 0 & 1/5 & -1/5 \\ 0 & 0 & 1/2 \end{bmatrix} \begin{bmatrix} 20 & 2 \\ 80 & 4 \\ 50 & 0 \end{bmatrix} \begin{bmatrix} 20/8 & 2/8 \\ 16 & 4/5 \\ 25 & 0 \end{bmatrix} \begin{matrix} = 5/20 \\ = 16/20 \end{matrix}$$

$$\textcircled{8} \text{ BV} = \{1, 5, 4\}$$

$$B^{-1} = \begin{bmatrix} 1/8 & 1/16 & 1/16 \\ 0 & 1/4 & -1/4 \\ 0 & 0 & 1/2 \end{bmatrix} \begin{bmatrix} 20 & 10/16 \\ 80 & 15/2 \\ 50 & 25 \end{bmatrix} \begin{matrix} \rightarrow 1 \\ \rightarrow 8 \\ \rightarrow 25 \end{matrix}$$

$$\Pi = [1/8, 3/16, 5/16]$$

$$\begin{cases} 2a_1 + 3a_2 + 5a_3 \leq 16 \\ a_i \geq 0, \text{int} \\ \frac{1}{8}a_1 + \frac{3}{16}a_2 + \frac{5}{16}a_3 - 1 \rightarrow \text{ex} \end{cases}$$

$$\frac{1}{16} \quad \frac{1}{16} \quad \frac{1}{16}$$

$$z_{\text{ex}} = 0$$

$$\text{opt max!}$$

$$z_{\text{opt}}^{\text{rel}} = 25 + 7\frac{1}{2} + \frac{5}{8} = 33\frac{1}{8}$$

$$34 \leq z^* \leq 34$$