

#7

$$\Rightarrow \left(\frac{1}{2}\right)x_1 + \left(\frac{1}{4}\right)x_2 + s_1 = 4 \text{ (step \#2)}$$

$$\Rightarrow x_1 + x_2 + a_1 = 10 \text{ (step \#4)}$$

$$\Rightarrow x_1 + 3x_2 - s_2 + a_2 = 20 \text{ (step \#3)}$$

$$\Rightarrow z = 2x_1 + 3x_2$$

for minimization multiply (-1) to the right side.

$$\Rightarrow z = -2x_1 - 3x_2$$

Now

$$z = -2x_1 - 3x_2 - Ma_1 - Ma_2 \text{ (step \#5)}$$

$$\Rightarrow z + 2x_1 + 3x_2 + Ma_1 + Ma_2 = 0$$

$$\Rightarrow 2x_1 + 3x_2 + Ma_1 + Ma_2 + z = 0$$

\Rightarrow Create a simple table.

	x_1	x_2	s_1	s_2	a_1	a_2	z	
s_1	$\frac{1}{2}$	$\frac{1}{4}$	1	0	0	0	0	4
a_1	1	1	0	0	1	0	0	10
a_2	1	3	0	-1	0	1	0	20
z	2	3	0	0	M	M	1	0