$2x_1 + 3x_2 \leq 15 \rightarrow s_1 \geq 0$

$2x_1 + 3x_2 + 1s_1 = 15$ → slack variables

x_1	x_2	s_1	s_2	s_3	z	
2	3	1	0	0	0	15
4	5	0	1	0	0	35
1	6	0	0	1	0	20
-5	-7	0	0	0	1	0

indicators

basic variables, for now!

$$7x_1 + 6x_2 + 8x_3 + s_1 = 118$$

x_1	x_2	x_3	s_1	s_2	z	RHS	
7	6	8	1	0	0	118	$118 \div 7 < 20$
4	5	10	0	1	0	220	$220 \div 4 > 50$
-8	-3	-1	0	0	1	0	

basic variable | non-basic

x_1	x_2	s_1	s_2	s_3	z	RHS
0	7	-3	0	7	0	21
0	0	15	-2	-5	0	51
3	0	2	8	3	3	24
0	0	5	0	-2	5	102

$x_1 = \frac{24}{3} = 8$

$x_2 = \frac{21}{7} = 3$

$$-R_2+3R_1 \to R_1 \Longrightarrow \begin{bmatrix} 0 & -1 & 11 & 13 & 3 & 0 & 20 \\ 3 & 1 & 1 & 2 & 0 & 0 & 4 \\ 0 & 2 & 8 & 13 & 0 & 3 & 92 \end{bmatrix}$$