$$Z = 5x_1 + 12x_2 + 4x_3$$

$$x_1 + 2x_2 + x_3 \leq 5$$

$$2x_1 - x_2 + 3x_3 = 2$$

	x_1	x_2	x_3	s_1	M	b
Z	5	12	4	0	0	0
~~x_1~~	1	2	1	0	M	5
s_2	2	-1	3	-1	M	2

optimal $Z = 29$

$x_1 = 1$

$x_2 = 2$

$x_3 = 0$

	x_1	x_2	x_3	s_1	M	b
Z	5	12	4	0	0	0
x_1	1	2	1	0	M	5
s_1	2	-1	3	-1	M	2

	X_1	X_2	X_3	S_1	A_1	R
S_1	$\frac{1}{3}$	$\frac{7}{3}$	0	1	$\frac{-1}{3}$	$\frac{13}{3}$
X_3	$\frac{2}{3}$	$\frac{-1}{3}$	1	0	$\frac{1}{3}$	$\frac{2}{3}$
Z	$\frac{-7}{3}$	$\frac{-40}{3}$	0	0	$M+4/3$	$8/3$

	X_1	X_2	X_3	S_1	A_1	R
X_2	0	1	$\frac{-1}{5}$	$\frac{2}{5}$	$\frac{-1}{5}$	$\frac{8}{5}$
	1	0	$\frac{7}{5}$	$\frac{1}{5}$	$\frac{2}{5}$	$\frac{9}{5}$
X_1	1	0	$\frac{2}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{9}{5}$
Z	0	0	$\frac{3}{5}$	$\frac{29}{5}$	$M-2/5$	29