

## A Degenerate Optimal Solution

Tableau 1:

	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$	
$x_3$	1	5	1	0	0	19
$x_4$	1	-1	0	1	0	1
$x_5$	-1	2	0	0	1	2
	-3	-7	0	0	0	0

Tableau 2:

	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$	
$x_3$	$\frac{7}{2}$	0	1	0	$-\frac{5}{2}$	14
$x_4$	$\frac{1}{2}$	0	0	1	$\frac{1}{2}$	2
$x_2$	$-\frac{1}{2}$	1	0	0	$\frac{1}{2}$	1
	$-\frac{13}{2}$	0	0	0	$\frac{7}{2}$	7

Tableau 3:

	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$	
$x_1$	1	0	$\frac{2}{7}$	0	$-\frac{5}{7}$	4
$x_4$	0	0	$-\frac{1}{7}$	1	$\frac{6}{7}$	0
$x_2$	0	1	$\frac{1}{7}$	0	$\frac{1}{7}$	3
	0	0	$\frac{13}{7}$	0	$-\frac{8}{7}$	33

Tableau 4 is optimal:

	$x_1$	$x_2$	$x_3$	$x_4$	$x_5$	
$x_1$	1	0	$\frac{1}{6}$	$\frac{5}{6}$	0	4
$x_5$	0	0	$-\frac{1}{6}$	$\frac{7}{6}$	1	0
$x_2$	0	1	$\frac{1}{6}$	$-\frac{1}{6}$	0	3
	0	0	$\frac{5}{3}$	$\frac{4}{3}$	0	33

## An Optimal Line Segment

Tableau 1:

	$w_1$	$w_2$	$w_3$	$w_4$	$w_5$	
$w_4$	-1	-1	1	1	0	-3
$w_5$	-5	1	-2	0	1	-7
	19	1	2	0	0	0

Tableau 2:

	$w_1$	$w_2$	$w_3$	$w_4$	$w_5$	
$w_4$	$-\frac{7}{2}$	$-\frac{1}{2}$	0	1	$\frac{1}{2}$	$-\frac{13}{2}$
$w_3$	$\frac{5}{2}$	$-\frac{1}{2}$	1	0	$-\frac{1}{2}$	$\frac{7}{2}$
	14	2	0	0	1	-7

Tableau 3:

	$w_1$	$w_2$	$w_3$	$w_4$	$w_5$	
$w_1$	1	$\frac{1}{7}$	0	$-\frac{2}{7}$	$-\frac{1}{7}$	$\frac{13}{7}$
$w_3$	0	$-\frac{6}{7}$	1	$\frac{5}{7}$	$-\frac{1}{7}$	$-\frac{8}{7}$
	0	0	0	4	3	-33

Tableau 4 is feasible and optimal:

	$w_1$	$w_2$	$w_3$	$w_4$	$w_5$	
$w_1$	1	0	$\frac{1}{6}$	$-\frac{1}{6}$	$-\frac{1}{6}$	$\frac{5}{3}$
$w_2$	0	1	$-\frac{7}{6}$	$-\frac{5}{6}$	$\frac{1}{6}$	$\frac{4}{3}$
	0	0	0	4	3	-33

Tableau 5 is also feasible and optimal:

	$w_1$	$w_2$	$w_3$	$w_4$	$w_5$	
$w_3$	6	0	1	-1	-1	10
$w_2$	7	1	0	-2	-1	13
	0	0	0	4	3	-33