

$x_n$	Coefficient of $x_1$ in Eq 1	Absolute change in solution for $x_n$
	1.001	
$x_1$	-1.81478	-1.80814
$x_2$	-0.0161541	-0.0162577
$x_3$	1.65059	1.64735
$x_4$	0.40739	0.404069
$x_5$	1.02213	1.02128
		0.00664
		$1.036 \times 10^{-4}$
		$3.24 \times 10^{-3}$
		$3.321 \times 10^{-3}$
		$8.5 \times 10^{-4}$

The largest absolute change was in the value obtained for  $x_1$ , which was a factor of about seven larger than the change in the coefficient of  $x_1$ . I have been advised that a factor of less than ten means in practice that the set of equations are <sup>likely to be</sup> absolutely well conditioned. So I state this; the solution is well conditioned w/rt small changes in the coefficient of  $x_1$  in the first equation (this is a marginal case).

correct to look at the effect on all the variables

yes ✓

2/2 ✓

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Problem Name : tma2

Students Name : paul

Current Package : Simlin

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MATRIX A

RHS

1.00000000, 1.50000000, .750000000, .600000000, .300000000		-.05000000
.750000000, 1.00100000, .600000000, .500000000, 1.50000000		1.35000000
.600000000, .850000000, .500000000, .430000000, 1.00000000		.920000000
.500000000, .600000000, .430000000, .370000000, .750000000		.710000000
.430000000, .500000000, .370000000, .330000000, .600000000		.570000000

Method = Partial Pivot - in the the order of rows, 1, 4, 3, 5

Number of decimal places = 8

Solution only

There are 5 equations

RESULTS

MATRIX A

RHS

1.0000, 1.5000, .75000, .60000, .30000,		-.0500
.00000, -.1500, .05500, .07000, .60000,		.73500
.00000, .00000, .03166, .04666, .62000,		.70500
.00000, .00000, .00000, .01268, .00194,		.00715
.00000, .00000, .00000, .00000, .93438,		.95507

The modulus of the largest multiplier was 0.966667

X1 = -1.81445

X2 = -0.0162088

X3 = 1.65025

X4 = 0.407388

X5 = 1.02215

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