

İleri Mühendislik Matematigi

1) Verilen denklem sistemini echolen forma getirin ve çözümünün varlığını (tek çözüm,, sonsuz çözüm, çözümsüz) inceleyin. 3 adet sayı grubu verilmiştir. Her sayı grubu için çözümün varlığını ve tekliliğini ayrı ayrı inceleyin.

$$a_{11}x + a_{12}y + a_{13}z = b_1$$

$$a_{21}x + a_{22}y + a_{23}z = b_2$$

$$a_{31}x + a_{32}y + a_{33}z = b_3$$

$$a_{41}x + a_{42}y + a_{43}z = b_4$$

$$a_{51}x + a_{52}y + a_{53}z = b_5$$

$$a_{61}x + a_{62}y + a_{63}z = b_6$$

$a_{11}, a_{12}, a_{13}, \dots$ değerleri ek tabloda verilmiştir.

Aynı Soru yu 3 farklı sayı grubu için çözmeniz isteniyor. Kendi numaranıza ait olan soruyu çözün.

Denklem1	Denklem2	Denklem 3
$a_{11}, a_{12}, a_{13}, b_1$	$a_{11}, a_{12}, a_{13}, b_1$	$a_{11}, a_{12}, a_{13}, b_1$
$a_{21}, a_{22}, a_{23}, b_2$	$a_{21}, a_{22}, a_{23}, b_2$	$a_{21}, a_{22}, a_{23}, b_2$
$a_{31}, a_{32}, a_{33}, b_3$	$a_{31}, a_{32}, a_{33}, b_3$	$a_{31}, a_{32}, a_{33}, b_3$
$a_{41}, a_{42}, a_{43}, b_4$	$a_{41}, a_{42}, a_{43}, b_4$	$a_{41}, a_{42}, a_{43}, b_4$
$a_{51}, a_{52}, a_{53}, b_5$	$a_{51}, a_{52}, a_{53}, b_5$	$a_{51}, a_{52}, a_{53}, b_5$
$a_{61}, a_{62}, a_{63}, b_6$	$a_{61}, a_{62}, a_{63}, b_6$	$a_{61}, a_{62}, a_{63}, b_6$
125117004 Denklem1	Denklem2	Denklem 3
-2,-1,5,-7	1,10,-4,6	-1,-8,4,7,
4,7,-7,-1	6,4,1,7	-8,-9,-1,2,
-2,4,8,-22	14,28,-6,26	29,12,16,13,
8,9,-17,13	-15,-38,10,-32	-26,-43,5,20,
14,27,-23,-11	10,-12,10,2	29,12,16,13,
-1,5,-3,-1	9,-22,14,-4	-26,-43,5,40,
125117009 Denklem1	Denklem2	Denklem 3
-1,5,-8,6	-1,4,-1,1	2,2,6,-6,
1,1,5,5	-5,5,-1,6	5,3,-2,2,
-3,-9,-12,-26	-9,6,-1,11	-1,1,14,-14,
-2,22,-22,34	11,1,-1,-14	1,3,20,-20,
-1,11,-11,17	-17,8,-1,21	-17,-11,0,0,
-5,19,-37,19	1,11,-3,-4	1,-1,6,-5,

135117005 Denklem1	Denklem2	Denklem 3
-1,1,-1,5	2,6,-2,4	-1,6,7,9,
5,-6,-9,1	10,-2,2,8	-10,-6,10,5,
3,-4,-11,11	28,-12,8,20	-13,12,31,32,
1,-2,-13,21	-34,-6,-2,-32	-22,0,34,28,
19,-23,-37,9	24,-24,12,12	-52,-18,64,43,
6,-8,-22,22	-14,-10,2,-32	-1,-10,-1,-2,
135117008 Denklem1	Denklem2	Denklem 3
-1,-2,-3,-8	-2,8,10,3	2,10,-2,4,
-10,3,2,3	-2,1,-2,2	-7,-4,-1,10,
35,-22,-23,-52	-2,15,22,4	-41,-50,1,38,
-33,3,-3,-15	-12,13,0,13	-19,-2,-5,34,
17,-12,-13,-30	0,35,60,5	-15,18,-9,42,
-53,9,1,-18	-6,10,6,7	9,-10,-5,8,
135117010 Denklem1	Denklem2	Denklem 3
-1,9,3,10	2,-4,6,-5	2,-8,-7,1,
-10,7,-7,-10	2,5,-2,10	6,7,-2,5,
49,-26,38,60	-16,-13,-8,-35	4,15,5,4,
-25,-24,-36,-80	-6,-33,22,-60	-16,2,18,-12,
-23,41,-5,10	-12,15,-28,15	-16,2,18,-12,
-6,-6,-3,-4	-2,-23,18,-40	-10,9,16,-14,
135117001 Denklem1	Denklem2	Denklem 3
-1,-2,7,-2	-1,7,-1,8	1,8,3,1,
-5,1,-3,-8	7,-3,8,-9	9,-2,-4,-8,
7,-8,27,10	-38,36,-43,69	38,8,-10,-30,
-23,9,-29,-36	17,19,20,5	34,-24,-22,-34,
-20,-7,26,-34	-31,33,-35,60	31,26,0,-20,
-13,7,-23,-20	17,19,20,10	10,2,-4,-2,
135117015 Denklem1	Denklem2	Denklem 3
2,8,2,-4	-1,-1,-5,3	1,-4,-5,-8,
1,-2,9,8	3,2,10,-9	2,-8,-3,6,
6,48,-26,-52	16,12,60,-48	-6,24,16,4,
8,8,40,24	-7,-6,-30,21	-2,8,-11,-50,
10,28,26,0	-14,-9,-45,42	3,-12,6,42,
-9,-8,3,-8	-16,-12,-60,48	0,0,-14,-88,

145117001 Denklem1	Denklem2	Denklem 3
-2,3,-6,5	1,-3,9,9	-2,3,9,-4,
-1,7,2,-7	-2,-7,-5,2	6,-6,-4,-2,
-5,24,0,-16	-5,-11,-19,-5	-8,6,-10,12,
5,-13,10,-3	-14,-23,-61,-26	-20,18,-2,16,
1,4,8,-12	7,-8,50,43	32,-36,-52,8,
3,1,14,-17	-2,19,-31,-76	1,8,-1,-5,
145117002 Denklem1	Denklem2	Denklem 3
-1,4,9,1	2,10,1,8	-1,7,-4,10,
-2,-7,1,-5	4,5,-3,6	10,2,10,1,
7,-13,-46,0	6,0,-7,4	43,-13,52,-26,
12,12,-40,16	10,35,0,30	41,1,44,-6,
2,-23,-35,-9	-18,-15,16,-22	16,32,4,42,
14,19,-41,21	2,25,6,36	10,1,9,4,
145117003 Denklem1	Denklem2	Denklem 3
1,6,10,-5	-1,5,10,4	2,-1,-3,3,
8,-9,-5,3	-8,2,-3,-1	10,9,10,3,
-6,21,25,-13	44,-30,-25,-11	-28,-28,-33,-6,
-3,39,55,-28	29,7,42,16	16,20,26,0,
23,-33,-25,14	-28,-12,-52,-20	54,43,44,21,
4,-3,7,7	29,7,42,16	6,11,16,-6,
145117004 Denklem1	Denklem2	Denklem 3
2,4,-7,3	2,3,-1,4	1,-5,8,7,
6,10,8,-5	4,10,-5,1	-4,-2,1,3,
-22,-36,-39,23	8,28,-16,-12	-5,3,-7,-4,
10,18,-6,1	14,37,-19,0	0,-22,33,31,
26,44,25,-17	4,2,1,15	-19,-15,13,22,
10,18,-6,2	-18,-43,21,-8	-10,1,5,3,
145117005 Denklem1	Denklem2	Denklem 3
1,-6,8,-8	-1,10,6,7	2,-8,-2,-9,
2,-10,-8,8	-1,-1,-5,-10	10,-8,8,-1,
0,4,-48,48	-1,21,17,24	-34,8,-38,-23,
8,-44,16,-16	3,-41,-29,-38	-46,56,-26,31,
-2,8,32,-32	-2,9,1,-3	22,8,32,33,
-4,16,64,-128	2,-42,-34,-48	-8,-4,-10,-8,

145117006 Denklem1	Denklem2	Denklem 3
2,4,2,-4	2,-5,-2,5	-1,-1,-8,-3,
-1,3,-5,6	2,1,10,2	4,4,7,5,
-13,-11,-25,38	12,-18,12,24	-9,-9,3,-6,
-2,-24,14,-12	-10,1,-38,-13	-9,-9,-22,-13,
-4,-28,12,-8	-2,23,38,-14	-18,-18,-19,-19,
-1,-27,19,-18	-4,2,2,-7	-13,-13,-29,-36,
145117007 Denklem1	Denklem2	Denklem 3
2,-1,-1,-9	-1,-5,-4,10	1,-5,-1,-4,
2,-5,-2,-4	-1,-7,9,10	-3,-9,6,-7,
-16,28,13,47	0,2,-13,0	13,31,-25,24,
0,-8,-2,10	-2,-18,44,20	10,-2,-16,-2,
14,-27,-12,-38	-3,-13,-25,30	-8,-8,14,-6,
-10,17,8,60	1,3,17,-10	-1,-2,-4,3,
145117008 Denklem1	Denklem2	Denklem 3
-1,-8,10,3	-2,1,-7,-9	-1,5,1,-2,
10,9,-2,9	-2,3,-5,3	-8,6,8,-3,
-11,-17,12,-6	12,-12,36,18	-5,-9,5,3,
-16,14,-36,-30	-2,-7,-15,-57	37,-15,-37,9,
52,61,-30,39	12,-10,38,30	-35,5,35,-5,
-1,2,-1,7	-4,-4,-20,-108	21,-3,-21,3,
145117009 Denklem1	Denklem2	Denklem 3
1,-2,6,-2	2,-1,9,-5	-2,5,5,6,
2,-9,5,4	4,8,-6,6	-8,10,5,2,
7,-24,28,2	14,23,-9,13	-22,35,25,22,
-5,30,-2,-22	-18,-31,15,-19	30,-35,-15,-2,
-12,44,-44,-8	-24,-28,-12,-4	24,-40,-30,-28,
9,-33,33,12	2,9,-15,11	-3,5,5,-5,
145117010 Denklem1	Denklem2	Denklem 3
-1,1,4,-9	-1,-2,2,-6	-2,10,-8,-7,
-5,-8,5,-3	5,-2,6,-10	10,5,-4,-8,
-16,-36,4,24	14,4,4,4	-28,-25,20,31,
-26,-39,29,-24	-6,12,-20,44	-18,-20,16,23,
-30,-35,45,-60	-8,8,-16,32	14,-15,12,6,
19,33,-16,3	-5,10,-7,-9	-8,-15,12,30,