the 0 th Minimal Constraint set is:

$y^0\_3 + x^1\_7 + k\_3= 0$

$y^0\_3 + [y^0\_9] + [x^1\_15] + k\_3= 0$

$[y^0\_7] + [y^0\_10] + x^1\_8 + k\_7= 0$

$y^1\_0 + x^2\_4 + k\_9= 0$

$y^1\_0 + y^1\_10 + x^2\_12 + k\_9= 0$

$y^1\_2 + y^1\_8 + [y^1\_15] + [x^2\_2] + k\_8= 0$

$y^1\_2 + x^2\_6 + k\_8= 0$

$y^1\_3 + [y^1\_9] + [y^1\_12] + x^2\_3 + k\_13= 0$

$y^1\_3 + x^2\_7 + k\_13= 0$

$y^1\_7 + y^1\_10 + x^2\_8 + k\_11= 0$

$y^2\_0 + x^3\_4 + k\_1= 0$

$y^2\_0 + y^2\_10 + x^3\_12 + k\_1= 0$

$y^2\_1 + x^3\_5 + k\_7= 0$

$y^2\_1 + y^2\_11 + x^3\_13 + k\_7= 0$

$[y^2\_2] + y^2\_8 + [x^3\_14] + k\_0= 0$

$y^2\_3 + y^2\_9 + y^2\_12 + x^3\_3 + k\_5= 0$

$y^2\_4 + y^2\_11 + x^3\_9 + k\_2= 0$

$y^2\_6 + y^2\_9 + x^3\_11 + k\_4= 0$

$y^2\_7 + y^2\_10 + x^3\_8 + k\_3= 0$

$y^3\_0 + y^3\_10 + y^3\_13 + x^4\_0 + k\_15= 0$

$y^3\_0 + y^3\_10 + x^4\_12 + k\_15= 0$

$y^3\_3 + y^3\_9 + y^3\_12 + x^4\_3 + k\_14= 0$

$y^3\_4 + y^3\_11 + x^4\_9 + k\_8= 0$

$y^3\_5 + y^3\_8 + x^4\_10 + k\_12= 0$

$y^4\_0 + y^4\_10 + x^5\_12 + k\_7= 0$

$y^4\_3 + y^4\_9 + y^4\_12 + x^5\_3 + k\_6= 0$

$y^5\_3 + [y^5\_9] + y^5\_12 + [x^6\_3] + k\_12= 0$

$S(x^1\_7) + y^1\_7= 0$

$S(x^1\_8) + y^1\_8= 0$

$S(x^2\_3) + y^2\_3= 0$

$S(x^2\_4) + y^2\_4= 0$

$S(x^2\_6) + y^2\_6= 0$

$S(x^2\_7) + y^2\_7= 0$

$S(x^2\_8) + y^2\_8= 0$

$S(x^2\_12) + y^2\_12= 0$

$S(x^3\_3) + y^3\_3= 0$

$S(x^3\_4) + y^3\_4= 0$

$S(x^3\_5) + y^3\_5= 0$

$S(x^3\_8) + y^3\_8= 0$

$S(x^3\_9) + y^3\_9= 0$

$S(x^3\_11) + y^3\_11= 0$

$S(x^3\_12) + y^3\_12= 0$

$S(x^3\_13) + y^3\_13= 0$

$S(x^4\_0) + y^4\_0 = 0$

$S(x^4\_3) + y^4\_3 = 0$

$S(x^4\_9) + y^4\_9 = 0$

$S(x^4\_10) + y^4\_10 = 0$

$S(x^4\_12) + y^4\_12 = 0$

$S(x^5\_3) + y^5\_3 = 0$

$S(x^5\_12) + y^5\_12 = 0$

the 1 th Minimal Constraint set is:

$y^0\_1 + x^1\_5 + k\_1 = 0$

$y^0\_1 + y^0\_11 + x^1\_13 + k\_1 = 0$

$[y^0\_2] + [y^0\_8] + x^1\_14 + k\_2 = 0$

$[y^0\_4] + y^0\_11 + [x^1\_9] + k\_4 = 0$

$[y^0\_7] + [y^0\_10] + x^1\_8 + k\_7 = 0$

$y^1\_0 + y^1\_10 + y^1\_13 + x^2\_0 + k\_9 = 0$

$y^1\_0 + y^1\_10 + x^2\_12 + k\_9 = 0$

$y^1\_1 + y^1\_11 + y^1\_14 + x^2\_1 + k\_15 = 0$

$y^1\_1 + y^1\_11 + x^2\_13 + k\_15 = 0$

$y^1\_5 + y^1\_8 + x^2\_10 + k\_14 = 0$

$y^2\_0 + y^2\_10 + y^2\_13 + x^3\_0 + k\_1 = 0$

$y^2\_1 + x^3\_5 + k\_7 = 0$

$[y^2\_2] + y^2\_8 + [y^2\_15] + x^3\_2 + k\_0 = 0$

$[y^2\_2] + y^2\_8 + [x^3\_14] + k\_0 = 0$

$y^2\_3 + y^2\_9 + y^2\_12 + x^3\_3 + k\_5 = 0$

$y^2\_3 + y^2\_9 + x^3\_15 + k\_5 = 0$

$y^3\_0 + x^4\_4 + k\_15 = 0$

$y^3\_2 + y^3\_8 + y^3\_15 + x^4\_2 + k\_9 = 0$

$y^3\_3 + x^4\_7 + k\_14 = 0$

$y^3\_5 + y^3\_8 + x^4\_10 + k\_12 = 0$

$y^4\_2 + x^5\_6 + k\_1 = 0$

$y^4\_4 + [y^4\_11] + [x^5\_9] + k\_0 = 0$

$y^4\_7 + y^4\_10 + x^5\_8 + k\_5 = 0$

$[y^5\_5] + y^5\_8 + [x^6\_10] + k\_10 = 0$

$y^5\_6 + [y^5\_9] + [x^6\_11] + k\_8 = 0$

$S(x^1\_5) + y^1\_5 = 0$

$S(x^1\_8) + y^1\_8 = 0$

$S(x^1\_13) + y^1\_13 = 0$

$S(x^1\_14) + y^1\_14 = 0$

$S(x^2\_0) + y^2\_0 = 0$

$S(x^2\_1) + y^2\_1 = 0$

$S(x^2\_10) + y^2\_10 = 0$

$S(x^2\_12) + y^2\_12 = 0$

$S(x^2\_13) + y^2\_13 = 0$

$S(x^3\_0) + y^3\_0 = 0$

$S(x^3\_2) + y^3\_2 = 0$

S(x^3_3) + y^3_3= 0
S(x^3_5) + y^3_5= 0
S(x^3_15) + y^3_15= 0
S(x^4_2) + y^4_2= 0
S(x^4_4) + y^4_4= 0
S(x^4_7) + y^4_7= 0
S(x^4_10) + y^4_10= 0
S(x^5_6) + y^5_6= 0
S(x^5_8) + y^5_8= 0
the 2 th Minimal Constraint set is:
y^0_0 + x^1_4 + k_0= 0
y^0_0 + [y^0_10] + [x^1_12] + k_0= 0
y^0_1 + x^1_5 + k_1= 0
y^0_1 + y^0_11 + x^1_13 + k_1= 0
y^0_3 + [y^0_9] + [y^0_12] + x^1_3 + k_3= 0
y^0_3 + [y^0_9] + [x^1_15] + k_3= 0
[y^0_4] + y^0_11 + [x^1_9] + k_4= 0
y^1_0 + y^1_10 + y^1_13 + x^2_0 + k_9= 0
y^1_0 + y^1_10 + x^2_12 + k_9= 0
y^1_1 + x^2_5 + k_15= 0
y^1_1 + y^1_11 + x^2_13 + k_15= 0
y^1_2 + y^1_8 + [y^1_15] + [x^2_2] + k_8= 0
y^1_2 + x^2_6 + k_8= 0
y^1_3 + x^2_7 + k_13= 0
y^1_4 + y^1_11 + x^2_9 + k_10= 0
y^1_5 + y^1_8 + x^2_10 + k_14= 0
y^2_0 + y^2_10 + y^2_13 + x^3_0 + k_1= 0
y^2_0 + x^3_4 + k_1= 0
y^2_0 + y^2_10 + x^3_12 + k_1= 0
[y^2_2] + y^2_8 + [y^2_15] + x^3_2 + k_0= 0
y^2_3 + y^2_9 + y^2_12 + x^3_3 + k_5= 0
y^2_3 + y^2_9 + x^3_15 + k_5= 0
y^2_5 + y^2_8 + x^3_10 + k_6= 0
y^2_6 + y^2_9 + x^3_11 + k_4= 0
y^2_7 + y^2_10 + x^3_8 + k_3= 0
y^3_0 + y^3_10 + x^4_12 + k_15= 0
y^3_2 + y^3_8 + y^3_15 + x^4_2 + k_9= 0
y^3_3 + y^3_9 + y^3_12 + x^4_3 + k_14= 0
y^3_4 + y^3_11 + x^4_9 + k_8= 0
[y^3_6] + y^3_9 + [x^4_11] + k_10= 0
y^4_2 + x^5_6 + k_1= 0
y^4_3 + y^4_9 + y^4_12 + x^5_3 + k_6= 0
y^5_3 + [y^5_9] + [x^6_15] + k_12= 0
y^5_6 + [y^5_9] + [x^6_11] + k_8= 0

S(x^1_3) + y^1_3= 0
S(x^1_4) + y^1_4= 0
S(x^1_5) + y^1_5= 0
S(x^1_13) + y^1_13= 0
S(x^2_0) + y^2_0= 0
S(x^2_5) + y^2_5= 0
S(x^2_6) + y^2_6= 0
S(x^2_7) + y^2_7= 0
S(x^2_9) + y^2_9= 0
S(x^2_10) + y^2_10= 0
S(x^2_12) + y^2_12= 0
S(x^2_13) + y^2_13= 0
S(x^3_0) + y^3_0= 0
S(x^3_2) + y^3_2= 0
S(x^3_3) + y^3_3= 0
S(x^3_4) + y^3_4= 0
S(x^3_8) + y^3_8= 0
S(x^3_10) + y^3_10= 0
S(x^3_11) + y^3_11= 0
S(x^3_12) + y^3_12= 0
S(x^3_15) + y^3_15= 0
S(x^4_2) + y^4_2= 0
S(x^4_3) + y^4_3= 0
S(x^4_9) + y^4_9= 0
S(x^4_12) + y^4_12= 0
S(x^5_3) + y^5_3= 0
S(x^5_6) + y^5_6= 0
the 3 th Minimal Constraint set is:
y^0_0 + x^1_4 + k_0= 0
y^0_0 + [y^0_10] + [x^1_12] + k_0= 0
y^0_1 + x^1_5 + k_1= 0
y^0_1 + y^0_11 + x^1_13 + k_1= 0
[y^0_2] + [y^0_8] + x^1_14 + k_2= 0
y^0_3 + x^1_7 + k_3= 0
y^0_3 + [y^0_9] + [x^1_15] + k_3= 0
[y^0_4] + y^0_11 + [x^1_9] + k_4= 0
[y^0_6] + [y^0_9] + x^1_11 + k_6= 0
y^1_0 + y^1_10 + y^1_13 + x^2_0 + k_9= 0
y^1_0 + x^2_4 + k_9= 0
y^1_1 + y^1_11 + y^1_14 + x^2_1 + k_15= 0
y^1_1 + y^1_11 + x^2_13 + k_15= 0
y^1_2 + x^2_6 + k_8= 0
y^1_2 + y^1_8 + x^2_14 + k_8= 0
y^1_4 + y^1_11 + x^2_9 + k_10= 0

$y^1\_5 + y^1\_8 + x^2\_10 + k\_14= 0$

$y^1\_7 + y^1\_10 + x^2\_8 + k\_11= 0$

$y^2\_0 + y^2\_10 + y^2\_13 + x^3\_0 + k\_1= 0$

$y^2\_1 + y^2\_11 + y^2\_14 + x^3\_1 + k\_7= 0$

$[y^2\_2] + y^2\_8 + [x^3\_14] + k\_0= 0$

$y^2\_4 + y^2\_11 + x^3\_9 + k\_2= 0$

$y^2\_6 + y^2\_9 + x^3\_11 + k\_4= 0$

$y^3\_0 + x^4\_4 + k\_15= 0$

$y^3\_1 + y^3\_11 + [y^3\_14] + [x^4\_1] + k\_11= 0$

$[y^3\_6] + y^3\_9 + [x^4\_11] + k\_10= 0$

$y^4\_4 + [y^4\_11] + [x^5\_9] + k\_0= 0$

$S(x^1\_4) + y^1\_4= 0$

$S(x^1\_5) + y^1\_5= 0$

$S(x^1\_7) + y^1\_7= 0$

$S(x^1\_11) + y^1\_11= 0$

$S(x^1\_13) + y^1\_13= 0$

$S(x^1\_14) + y^1\_14= 0$

$S(x^2\_0) + y^2\_0= 0$

$S(x^2\_1) + y^2\_1= 0$

$S(x^2\_4) + y^2\_4= 0$

$S(x^2\_6) + y^2\_6= 0$

$S(x^2\_8) + y^2\_8= 0$

$S(x^2\_9) + y^2\_9= 0$

$S(x^2\_10) + y^2\_10= 0$

$S(x^2\_13) + y^2\_13= 0$

$S(x^2\_14) + y^2\_14= 0$

$S(x^3\_0) + y^3\_0= 0$

$S(x^3\_1) + y^3\_1= 0$

$S(x^3\_9) + y^3\_9= 0$

$S(x^3\_11) + y^3\_11= 0$

$S(x^4\_4) + y^4\_4= 0$

the 4 th Minimal Constraint set is:

$y^0\_0 + [y^0\_10] + [y^0\_13] + x^1\_0 + k\_0= 0$

$y^0\_0 + [y^0\_10] + [x^1\_12] + k\_0= 0$

$y^1\_0 + x^2\_4 + k\_9= 0$

$[y^1\_6] + [y^1\_9] + x^2\_11 + k\_12= 0$

$y^2\_4 + y^2\_11 + x^3\_9 + k\_2= 0$

$[y^3\_6] + y^3\_9 + [x^4\_11] + k\_10= 0$

$S(x^1\_0) + y^1\_0= 0$

$S(x^2\_4) + y^2\_4= 0$

$S(x^2\_11) + y^2\_11= 0$

$S(x^3\_9) + y^3\_9= 0$

the 5 th Minimal Constraint set is:

$y^0\_3 + x^1\_7 + k\_3= 0$

y^0_3 + [y^0_9] + [x^1_15] + k_3= 0
[y^0_5] + [y^0_8] + x^1_10 + k_5= 0
y^1_7 + y^1_10 + x^2_8 + k_11= 0
[y^2_2] + y^2_8 + [x^3_14] + k_0= 0
S(x^1_7) + y^1_7= 0
S(x^1_10) + y^1_10= 0
S(x^2_8) + y^2_8= 0
the 6 th Minimal Constraint set is:
 y^0_3 + [y^0_9] + [y^0_12] + x^1_3 + k_3= 0
 y^0_3 + [y^0_9] + [x^1_15] + k_3= 0
 y^1_3 + [y^1_9] + [x^2_15] + k_13= 0
 S(x^1_3) + y^1_3= 0
the 7 th Minimal Constraint set is:
 [y^0_2] + [x^1_6] + k_2= 0
the 8 th Minimal Constraint set is:
 [y^2_2] + [x^3_6] + k_0= 0
the 9 th Minimal Constraint set is:
 [y^4_1] + [x^5_5] + k_3= 0