21. sin

mod:2-1-1

relation of input:

$X_{1,1} = 3.142 + X_{0,1}$
$X_{2,1} = -9.425 - X_{0,1}$
$X_{3,1} = -9.425 + X_{0,1}$
$X_{4,1} = 9.425 + X_{0,1}$
$X_{5,1} = 6.283 - X_{0,1}$
$X_{6,1} = 9.425 - X_{0,1}$
$X_{7,1} = X_{0,1}$
$X_{8,1} = -3.142 + X_{0,1}$
$X_{9,1} = -6.283 - X_{0,1}$
$X_{10,1} = -3.142 - X_{0,1}$
$X_{11,1} = 6.283 + X_{0,1}$
$X_{12,1} = -X_{0,1}$
$X_{13,1} = 3.142 - X_{0,1}$
$X_{14,1} = -6.283 + X_{0,1}$

output:

$Y_{0,1} = sin(X_{0,1})$
$Y_{1,1} = sin(3.142 + X_{0,1})$
$Y_{2,1} = sin(-9.425 - X_{0,1})$
$Y_{3,1} = sin(-9.425 + X_{0,1})$
$Y_{4,1} = sin(9.425 + X_{0,1})$
$Y_{5,1} = sin(6.283 - X_{0,1})$
$Y_{6,1} = sin(9.425 - X_{0,1})$
$Y_{7,1} = sin(X_{0,1})$
$Y_{8,1} = sin(-3.142 + X_{0,1})$
$Y_{9,1} = sin(-6.283 - X_{0,1})$
$Y_{10,1} = sin(-3.142 - X_{0,1})$
$Y_{11,1} = sin(6.283 + X_{0,1})$
$Y_{12,1} = sin(-X_{0,1})$
$Y_{13,1} = sin(3.142 - X_{0,1})$
$Y_{14,1} = sin(-6.283 + X_{0,1})$

MR1: $-Y_{0,1} - Y_{1,1} = 0$;
MR2: $-Y_{0,1} + Y_{2,1} = 0$;
MR3: $Y_{0,1} + Y_{3,1} = 0$;
MR4: $-Y_{0,1} - Y_{4,1} = 0$;
MR5: $Y_{0,1} + Y_{5,1} = 0$;
MR6: $-Y_{0,1} + Y_{6,1} = 0$;
MR7: $Y_{0,1} - Y_{7,1} = 0$;
MR8: $-Y_{0,1} - Y_{8,1} = 0$;
MR9: $2Y_{0,1} + 2Y_{9,1} = 0$;
MR10: $Y_{0,1} - Y_{10,1} = 0$;
MR11: $Y_{0,1} - Y_{11,1} = 0$;
MR12: $-Y_{0,1} - Y_{12,1} = 0$;

MR13: $Y_{0,1} - Y_{13,1} = 0$;
MR14: $Y_{0,1} - Y_{14,1} = 0$;

mod:2-1-2

relation of input:
$X_{1,1} = 6.283 - X_{0,1}$
$X_{2,1} = 7.854 - 2X_{0,1}$
$X_{3,1} = X_{0,1}$
$X_{4,1} = -6.283 - X_{0,1}$
$X_{5,1} = -3.142 - X_{0,1}$
$X_{6,1} = -3.142 + X_{0,1}$
$X_{7,1} = -9.425 - X_{0,1}$
$X_{8,1} = 6.283 + X_{0,1}$
$X_{9,1} = 4.712 + 2X_{0,1}$
$X_{10,1} = 3.142 + X_{0,1}$
$X_{11,1} = -9.425 + X_{0,1}$
$X_{12,1} = -X_{0,1}$
$X_{13,1} = 9.425 + X_{0,1}$
$X_{14,1} = -6.283 + X_{0,1}$
$X_{15,1} = 9.425 - X_{0,1}$
$X_{16,1} = 3.142 - X_{0,1}$
$X_{17,1} = -4.712 + 2X_{0,1}$

output:
$Y_{0,1} = sin(X_{0,1})$
$Y_{1,1} = sin(6.283 - X_{0,1})$
$Y_{2,1} = sin(7.854 - 2X_{0,1})$
$Y_{3,1} = sin(X_{0,1})$
$Y_{4,1} = sin(-6.283 - X_{0,1})$
$Y_{5,1} = sin(-3.142 - X_{0,1})$
$Y_{6,1} = sin(-3.142 + X_{0,1})$
$Y_{7,1} = sin(-9.425 - X_{0,1})$
$Y_{8,1} = sin(6.283 + X_{0,1})$
$Y_{9,1} = sin(4.712 + 2X_{0,1})$
$Y_{10,1} = sin(3.142 + X_{0,1})$
$Y_{11,1} = sin(-9.425 + X_{0,1})$
$Y_{12,1} = sin(-X_{0,1})$
$Y_{13,1} = sin(9.425 + X_{0,1})$
$Y_{14,1} = sin(-6.283 + X_{0,1})$
$Y_{15,1} = sin(9.425 - X_{0,1})$
$Y_{16,1} = sin(3.142 - X_{0,1})$
$Y_{17,1} = sin(-4.712 + 2X_{0,1})$

MR1: $-2Y_{0,1}^2 - 2Y_{0,1}Y_{1,1} + 2Y_{0,1} + 2Y_{1,1} = 0$;
MR2: $1 - 2Y_{0,1}^2 - Y_{2,1} = 0$;
MR3: $-Y_{0,1}^2 + 2Y_{0,1}Y_{3,1} - Y_{3,1}^2 = 0$;
MR4: $Y_{0,1}^2 + 2Y_{0,1}Y_{4,1} + Y_{4,1}^2 = 0$;
MR5: $-Y_{0,1}^2 + Y_{0,1}Y_{5,1} = 0$;
MR6: $Y_{0,1}^2 + 2Y_{0,1}Y_{6,1} + Y_{6,1}^2 = 0$;
MR7: $-Y_{0,1}Y_{7,1} - Y_{0,1} + Y_{7,1}^2 + Y_{7,1} = 0$;

MR8: $-2Y_{0,1}^2 + 2Y_{0,1}Y_{8,1} - 2Y_{0,1} + 2Y_{8,1} = 0$;

MR9: $-1 + 2Y_{0,1}^2 - Y_{9,1} = 0$;

MR10: $2Y_{0,1}^2 + Y_{0,1}Y_{10,1} - Y_{0,1} - Y_{10,1}^2 - Y_{10,1} = 0$;

MR11: $-Y_{0,1}^2 + Y_{0,1}Y_{11,1} - 2Y_{0,1} + 2Y_{11,1}^2 - 2Y_{11,1} = 0$;

MR12: $-Y_{0,1}^2 - 2Y_{0,1}Y_{12,1} - Y_{12,1}^2 = 0$;

MR13: $2Y_{0,1}Y_{13,1} + 2Y_{13,1}^2 = 0$;

MR14: $-Y_{0,1}^2 + 2Y_{0,1}Y_{14,1} - Y_{14,1}^2 = 0$;

MR15: $-Y_{0,1}Y_{15,1} - Y_{0,1} + Y_{15,1}^2 + Y_{15,1} = 0$;

MR16: $-2Y_{0,1}^2 + Y_{0,1}Y_{16,1} + 2Y_{0,1} + Y_{16,1}^2 - 2Y_{16,1} = 0$;

MR17: $-1 + 2Y_{0,1}^2 + Y_{17,1} = 0$;

mod:2-1-3

relation of input:

$X_{1,1} = 3.142 + X_{0,1}$

$X_{2,1} = -9.425 + X_{0,1}$

$X_{3,1} = -3.142 - X_{0,1}$

$X_{4,1} = 9.425 + X_{0,1}$

$X_{5,1} = 7.854 - X_{0,1}$

$X_{6,1} = -6.283 + X_{0,1}$

$X_{7,1} = -7.854 - X_{0,1}$

$X_{8,1} = -3.142 + X_{0,1}$

$X_{9,1} = 7.854 + 2X_{0,1}$

$X_{10,1} = -X_{0,1}$

$X_{11,1} = -1.571 - 2X_{0,1}$

$X_{12,1} = 6.283 + X_{0,1}$

$X_{13,1} = -7.854 + 2X_{0,1}$

$X_{14,1} = X_{0,1}$

$X_{15,1} = 3.142 - X_{0,1}$

output:

$Y_{0,1} = sin(X_{0,1})$

$Y_{1,1} = sin(3.142 + X_{0,1})$

$Y_{2,1} = sin(-9.425 + X_{0,1})$

$Y_{3,1} = sin(-3.142 - X_{0,1})$

$Y_{4,1} = sin(9.425 + X_{0,1})$

$Y_{5,1} = sin(7.854 - X_{0,1})$

$Y_{6,1} = sin(-6.283 + X_{0,1})$

$Y_{7,1} = sin(-7.854 - X_{0,1})$

$Y_{8,1} = sin(-3.142 + X_{0,1})$

$Y_{9,1} = sin(7.854 + 2X_{0,1})$

$Y_{10,1} = sin(-X_{0,1})$

$Y_{11,1} = sin(-1.571 - 2X_{0,1})$

$Y_{12,1} = sin(6.283 + X_{0,1})$

$Y_{13,1} = sin(-7.854 + 2X_{0,1})$

$Y_{14,1} = sin(X_{0,1})$

$Y_{15,1} = sin(3.142 - X_{0,1})$

MR1: $-Y_{0,1}^3 - Y_{0,1}Y_{1,1} + Y_{0,1}Y_{1,1}^2 - Y_{1,1}^2 = 0$;

MR2: $-Y_{0,1}^2 + 2Y_{0,1}^3 - 2Y_{0,1}^2Y_{2,1} - Y_{0,1}Y_{2,1} - 2Y_{0,1}Y_{2,1}^2 + 2Y_{2,1}^3 = 0$;

MR3: $Y_{0,1}^3 - 2Y_{0,1}^2Y_{3,1} + Y_{0,1}Y_{3,1} + 2Y_{0,1}Y_{3,1}^2 - Y_{3,1}^2 - Y_{3,1}^3 = 0$;

MR4: $-2Y_{0,1}^3 - 2Y_{0,1}^2Y_{4,1} + 2Y_{0,1}Y_{4,1} + 2Y_{0,1}Y_{4,1}^2 + 2Y_{0,1} + 2Y_{4,1}^2 + 2Y_{4,1}^3 + 2Y_{4,1} = 0$;

MR5: $-2 + 2Y_{0,1}^2 + 2Y_{0,1}^3 + 2Y_{0,1}^2Y_{5,1} + 2Y_{0,1}Y_{5,1}^2 - 2Y_{0,1} + 2Y_{5,1}^2 + 2Y_{5,1}^3 - 2Y_{5,1} = 0$;

MR6: $-Y_{0,1}^2 + 2Y_{0,1}^3 + 2Y_{0,1}Y_{6,1} - 2Y_{0,1}Y_{6,1}^2 - Y_{6,1}^2 = 0$;

MR7: $-2Y_{0,1}^2Y_{7,1} - 2Y_{7,1}^3 + 2Y_{7,1} = 0$;

MR8: $-Y_{0,1}^2Y_{8,1} + 2Y_{0,1}Y_{8,1} - 2Y_{0,1}Y_{8,1}^2 + 2Y_{8,1}^2 - Y_{8,1}^3 = 0$;

MR9: $1 - 2Y_{0,1}^2 - 2Y_{0,1}^3 - Y_{0,1}Y_{9,1} + Y_{0,1} - Y_{9,1} = 0$;

MR10: $-Y_{0,1}Y_{10,1} - Y_{0,1}Y_{10,1}^2 + Y_{0,1} - Y_{10,1}^2 - Y_{10,1}^3 + Y_{10,1} = 0$;

MR11: $1 - 2Y_{0,1}^2 - 2Y_{0,1}^2Y_{11,1} + Y_{11,1}^2 + 2Y_{11,1} = 0$;

MR12: $-2Y_{0,1}^2 + Y_{0,1}^3 + Y_{0,1}^2Y_{12,1} + 2Y_{0,1}Y_{12,1} - Y_{0,1}Y_{12,1}^2 - Y_{12,1}^3 = 0$;

MR13: $1 - 2Y_{0,1}^2 - 2Y_{0,1}^3 + 2Y_{0,1}^2Y_{13,1} + Y_{0,1}Y_{13,1} + Y_{0,1} - Y_{13,1}^2 = 0$;

MR14: $2Y_{0,1}^3 - 2Y_{0,1}^2Y_{14,1} - 2Y_{0,1}Y_{14,1}^2 + 2Y_{14,1}^3 = 0$;

MR15: $2Y_{0,1}^2 - 2Y_{0,1}^3 + 2Y_{0,1}^2Y_{15,1} - 2Y_{0,1}Y_{15,1} + 2Y_{0,1}Y_{15,1}^2 - 2Y_{15,1}^3 = 0$;

4. arcsin

mod:2-1-1

relation of input:

$X_{1,1} = X_{0,1}$

$X_{2,1} = -X_{0,1}$

output:

$Y_{0,1} = arcsin(X_{0,1})$

$Y_{1,1} = arcsin(X_{0,1})$

$Y_{2,1} = arcsin(-X_{0,1})$

MR1: $2Y_{0,1} - 2Y_{1,1} = 0$;

MR2: $-2Y_{0,1} - 2Y_{2,1} = 0$;

mod:2-1-2

relation of input:

$X_{1,1} = X_{0,1}$

$X_{2,1} = -X_{0,1}$

output:

$Y_{0,1} = arcsin(X_{0,1})$

$Y_{1,1} = arcsin(X_{0,1})$

$Y_{2,1} = arcsin(-X_{0,1})$

MR1: $2Y_{0,1}^2 - 2Y_{0,1}Y_{1,1} + 2Y_{0,1} - 2Y_{1,1} = 0$;

MR2: $-2Y_{0,1}^2 - 2Y_{0,1}Y_{2,1} - 2Y_{0,1} - 2Y_{2,1} = 0$;

mod:2-1-3

relation of input:

$X_{1,1} = -X_{0,1}$

$X_{2,1} = X_{0,1}$

output:

$Y_{0,1} = arcsin(X_{0,1})$
$Y_{1,1} = arcsin(-X_{0,1})$
$Y_{2,1} = arcsin(X_{0,1})$

MR1: $2Y_{0,1}^2 + 2Y_{0,1}^3 + 2Y_{0,1}^2Y_{1,1} + 2Y_{0,1}Y_{1,1} - 2Y_{0,1}Y_{1,1}^2 + 2Y_{0,1} - 2Y_{1,1}^3 + 2Y_{1,1} = 0;$
MR2: $2Y_{0,1}^2 - 2Y_{0,1}^3 - 2Y_{0,1}^2Y_{2,1} + 2Y_{0,1}Y_{2,1}^2 - Y_{0,1} - 2Y_{2,1}^2 + 2Y_{2,1}^3 + Y_{2,1} = 0;$

5. arcsinh

mod:2-1-1

relation of input:
$X_{1,1} = X_{0,1}$
$X_{2,1} = -X_{0,1}$

output:
$Y_{0,1} = arcsinh(X_{0,1})$
$Y_{1,1} = arcsinh(X_{0,1})$
$Y_{2,1} = arcsinh(-X_{0,1})$

MR1: $-Y_{0,1} + Y_{1,1} = 0;$
MR2: $-Y_{0,1} - Y_{2,1} = 0;$

mod:2-1-2

relation of input:
$X_{1,1} = X_{0,1}$
$X_{2,1} = -X_{0,1}$

output:
$Y_{0,1} = arcsinh(X_{0,1})$
$Y_{1,1} = arcsinh(X_{0,1})$
$Y_{2,1} = arcsinh(-X_{0,1})$

MR1: $Y_{0,1}^2 - Y_{0,1}Y_{1,1} + 2Y_{0,1} - 2Y_{1,1} = 0;$
MR2: $-Y_{0,1}^2 - Y_{0,1}Y_{2,1} - 2Y_{0,1} - 2Y_{2,1} = 0;$

mod:2-1-3

relation of input:
$X_{1,1} = X_{0,1}$
$X_{2,1} = -X_{0,1}$

output:
$Y_{0,1} = arcsinh(X_{0,1})$
$Y_{1,1} = arcsinh(X_{0,1})$
$Y_{2,1} = arcsinh(-X_{0,1})$

MR1: $-Y_{0,1}^2 + Y_{0,1}^3 - Y_{0,1}^2Y_{1,1} + Y_{0,1}Y_{1,1} - Y_{0,1}Y_{1,1}^2 + 2Y_{0,1} + Y_{1,1}^3 - 2Y_{1,1} = 0;$
MR2: $-2Y_{0,1}^2 - Y_{0,1}^3 + 2Y_{0,1}^2Y_{2,1} + Y_{0,1}Y_{2,1}^2 + 2Y_{0,1} + 2Y_{2,1}^2 - 2Y_{2,1}^3 + 2Y_{2,1} = 0;$

15. log

mod:2-1-1

relation of input:

$X_{1,1} = X_{0,1}$
$X_{2,1} = 2X_{0,1}$

output:

$Y_{0,1} = log(X_{0,1})$
$Y_{1,1} = log(X_{0,1})$
$Y_{2,1} = log(2X_{0,1})$

MR1: $Y_{0,1} - Y_{1,1} = 0$;
MR2: $-1.386 - 2Y_{0,1} + 2Y_{2,1} = 0$;

mod:2-1-2

relation of input:

$X_{1,1} = X_{0,1}$
$X_{2,1} = 2X_{0,1}$

output:

$Y_{0,1} = log(X_{0,1})$
$Y_{1,1} = log(X_{0,1})$
$Y_{2,1} = log(2X_{0,1})$

MR1: $-2Y_{0,1}^2 + 2Y_{0,1} + 2Y_{1,1}^2 - 2Y_{1,1} = 0$;
MR2: $0.906 + Y_{0,1}^2 - 2Y_{0,1}Y_{2,1} + 2Y_{0,1} + Y_{2,1}^2 - 2Y_{2,1} = 0$;

mod:2-1-3

relation of input:

$X_{1,1} = X_{0,1}$

output:

$Y_{0,1} = log(X_{0,1})$
$Y_{1,1} = log(X_{0,1})$

MR1: $2Y_{0,1}^2 + 2Y_{0,1}^3 - 2Y_{0,1}^2Y_{1,1} - 2Y_{0,1}Y_{1,1}^2 - Y_{0,1} - 2Y_{1,1}^2 + 2Y_{1,1}^3 + Y_{1,1} = 0$;

12. exp

mod:2-1-2

relation of input:

$X_{1,1} = -10 - X_{0,1}$
$X_{2,1} = 1.608 - X_{0,1}$
$X_{3,1} = -1.712 - X_{0,1}$

output:

$Y_{0,1} = exp(X_{0,1})$
$Y_{1,1} = exp(-10 - X_{0,1})$
$Y_{2,1} = exp(1.608 - X_{0,1})$
$Y_{3,1} = exp(-1.712 - X_{0,1})$

MR1: $2Y_{0,1}Y_{1,1} = 0$;
MR2: $-9.988 + 2Y_{0,1}Y_{2,1} = 0$;
MR3: $-0.361 + 2Y_{0,1}Y_{3,1} = 0$;

mod:2-1-3

relation of input:
$X_{1,1} = -10 - X_{0,1}$

output:
$Y_{0,1} = exp(X_{0,1})$
$Y_{1,1} = exp(-10 - X_{0,1})$

MR1: $2Y_{0,1}Y_{1,1} + 2Y_{0,1}Y_{1,1}^2 = 0$;

14. hypot

mod:2-1-1

relation of input:
$(X_{0,1}, X_{0,2}) = (X_{0,2}, X_{0,1})$
$(X_{1,1}, X_{1,2}) = (-X_{0,1}, X_{0,2})$
$(X_{2,1}, X_{2,2}) = (2X_{0,2}, 2X_{0,1})$
$(X_{3,1}, X_{3,2}) = (-2X_{0,2}, 2X_{0,1})$
$(X_{4,1}, X_{4,2}) = (X_{0,1}, X_{0,2})$
$(X_{5,1}, X_{5,2}) = (-2X_{0,1}, 2X_{0,2})$
$(X_{6,1}, X_{6,2}) = (X_{0,2}, -X_{0,1})$
$(X_{7,1}, X_{7,2}) = (-X_{0,1}, -X_{0,2})$
$(X_{8,1}, X_{8,2}) = (2X_{0,2}, -2X_{0,1})$
$(X_{9,1}, X_{9,2}) = (-X_{0,2}, X_{0,1})$
$(X_{10,1}, X_{10,2}) = (-2X_{0,1}, -2X_{0,2})$
$(X_{11,1}, X_{11,2}) = (2X_{0,1}, -2X_{0,2})$

output:
$Y_{0,1} = hypot(X_{0,1}, X_{0,2})$
$Y_{1,1} = hypot(X_{0,2}, X_{0,1})$
$Y_{2,1} = hypot(-X_{0,1}, X_{0,2})$
$Y_{3,1} = hypot(2X_{0,2}, 2X_{0,1})$
$Y_{4,1} = hypot(-2X_{0,2}, 2X_{0,1})$
$Y_{5,1} = hypot(X_{0,1}, X_{0,2})$
$Y_{6,1} = hypot(-2X_{0,1}, 2X_{0,2})$
$Y_{7,1} = hypot(X_{0,2}, -X_{0,1})$
$Y_{8,1} = hypot(-X_{0,1}, -X_{0,2})$
$Y_{9,1} = hypot(2X_{0,2}, -2X_{0,1})$
$Y_{10,1} = hypot(-X_{0,2}, X_{0,1})$
$Y_{11,1} = hypot(-2X_{0,1}, -2X_{0,2})$
$Y_{12,1} = hypot(2X_{0,1}, -2X_{0,2})$

MR1: $Y_{0,1} - Y_{1,1} = 0$;
MR2: $-Y_{0,1} + Y_{2,1} = 0$;
MR3: $-2Y_{0,1} + Y_{3,1} = 0$;
MR4: $2Y_{0,1} - Y_{4,1} = 0$;
MR5: $-Y_{0,1} + Y_{5,1} = 0$;

MR6: $-2Y_{0,1} + Y_{6,1} = 0;$
MR7: $Y_{0,1} - Y_{7,1} = 0;$
MR8: $-Y_{0,1} + Y_{8,1} = 0;$
MR9: $2Y_{0,1} - Y_{9,1} = 0;$
MR10: $Y_{0,1} - Y_{10,1} = 0;$
MR11: $2Y_{0,1} - Y_{11,1} = 0;$
MR12: $2Y_{0,1} - Y_{12,1} = 0;$

mod:2-1-2

relation of input:

$(X_{0,1}, X_{0,2}) = (-X_{0,2}, X_{0,1})$
$(X_{1,1}, X_{1,2}) = (-X_{0,1}, -X_{0,2})$
$(X_{2,1}, X_{2,2}) = (X_{0,1}, X_{0,2})$
$(X_{3,1}, X_{3,2}) = (X_{0,1}, -X_{0,2})$
$(X_{4,1}, X_{4,2}) = (-0.002 + X_{0,2}, -0.006 + X_{0,1})$
$(X_{5,1}, X_{5,2}) = (-X_{0,2}, -X_{0,1})$
$(X_{6,1}, X_{6,2}) = (-X_{0,1}, X_{0,2})$
$(X_{7,1}, X_{7,2}) = (X_{0,2}, -X_{0,1})$

output:

$Y_{0,1} = hypot(X_{0,1}, X_{0,2})$
$Y_{1,1} = hypot(-X_{0,2}, X_{0,1})$
$Y_{2,1} = hypot(-X_{0,1}, -X_{0,2})$
$Y_{3,1} = hypot(X_{0,1}, X_{0,2})$
$Y_{4,1} = hypot(X_{0,1}, -X_{0,2})$
$Y_{5,1} = hypot(-0.002 + X_{0,2}, -0.006 + X_{0,1})$
$Y_{6,1} = hypot(-X_{0,2}, -X_{0,1})$
$Y_{7,1} = hypot(-X_{0,1}, X_{0,2})$
$Y_{8,1} = hypot(X_{0,2}, -X_{0,1})$

MR1: $Y_{0,1}^2 - Y_{0,1}Y_{1,1} - 2Y_{0,1} + 2Y_{1,1} = 0;$
MR2: $-Y_{0,1}^2 + 2Y_{0,1}Y_{2,1} - 2Y_{0,1} - Y_{2,1}^2 + 2Y_{2,1} = 0;$
MR3: $Y_{0,1}^2 - 2Y_{0,1}Y_{3,1} + Y_{0,1} + Y_{3,1}^2 - Y_{3,1} = 0;$
MR4: $-Y_{0,1}^2 + 2Y_{0,1}Y_{4,1} - Y_{4,1}^2 = 0;$
MR5: $Y_{0,1}^2 - 2Y_{0,1}Y_{5,1} + Y_{5,1}^2 = 0;$
MR6: $Y_{0,1}^2 - 2Y_{0,1}Y_{6,1} + Y_{6,1}^2 = 0;$
MR7: $-Y_{0,1}^2 + 2Y_{0,1}Y_{7,1} - 2Y_{0,1} - Y_{7,1}^2 + 2Y_{7,1} = 0;$
MR8: $Y_{0,1}^2 - 2Y_{0,1}Y_{8,1} + Y_{0,1} + Y_{8,1}^2 - Y_{8,1} = 0;$

mod:2-1-3

relation of input:

$(X_{0,1}, X_{0,2}) = (X_{0,1}, -X_{0,2})$
$(X_{1,1}, X_{1,2}) = (X_{0,2}, X_{0,1})$
$(X_{2,1}, X_{2,2}) = (X_{0,2}, -X_{0,1})$
$(X_{3,1}, X_{3,2}) = (-X_{0,1}, X_{0,2})$
$(X_{4,1}, X_{4,2}) = (-X_{0,1}, -X_{0,2})$
$(X_{5,1}, X_{5,2}) = (-X_{0,2}, X_{0,1})$
$(X_{6,1}, X_{6,2}) = (X_{0,1}, X_{0,2})$
$(X_{7,1}, X_{7,2}) = (-X_{0,2}, -X_{0,1})$

output:

$Y_{0,1} = hypot(X_{0,1}, X_{0,2})$

$Y_{1,1} = hypot(X_{0,1}, -X_{0,2})$

$Y_{2,1} = hypot(X_{0,2}, X_{0,1})$

$Y_{3,1} = hypot(X_{0,2}, -X_{0,1})$

$Y_{4,1} = hypot(-X_{0,1}, X_{0,2})$

$Y_{5,1} = hypot(-X_{0,1}, -X_{0,2})$

$Y_{6,1} = hypot(-X_{0,2}, X_{0,1})$

$Y_{7,1} = hypot(X_{0,1}, X_{0,2})$

$Y_{8,1} = hypot(-X_{0,2}, -X_{0,1})$

MR1: $-2Y_{0,1}^2 + Y_{0,1}^3 - 2Y_{0,1}^2 Y_{1,1} + 2Y_{0,1}Y_{1,1} + Y_{0,1}Y_{1,1}^2 + 2Y_{0,1} - 2Y_{1,1} = 0;$

MR2: $-Y_{0,1}^3 + 2Y_{0,1}^2 Y_{2,1} + Y_{0,1}Y_{2,1} - Y_{0,1}Y_{2,1}^2 + 2Y_{0,1} - Y_{2,1}^2 - 2Y_{2,1} = 0;$

MR3: $0.002 + Y_{0,1}^2 - Y_{0,1}^2 Y_{3,1} + 2Y_{0,1}Y_{3,1}^2 - 2Y_{0,1} - Y_{3,1}^2 - Y_{3,1}^3 + 2Y_{3,1} = 0;$

MR4: $-2Y_{0,1}^2 - Y_{0,1}^2 Y_{4,1} + 2Y_{0,1}Y_{4,1} + 2Y_{0,1}Y_{4,1}^2 + 2Y_{0,1} - Y_{4,1}^3 - 2Y_{4,1} = 0;$

MR5: $-Y_{0,1}^2 + Y_{0,1}^3 - Y_{0,1}^2 Y_{5,1} + 2Y_{0,1}Y_{5,1} - 2Y_{0,1}Y_{5,1}^2 + 2Y_{0,1} - Y_{5,1}^2 + 2Y_{5,1}^3 - 2Y_{5,1} = 0;$

MR6: $Y_{0,1}^2 - Y_{0,1}^3 + Y_{0,1}^2 Y_{6,1} + Y_{0,1}Y_{6,1} + Y_{0,1}Y_{6,1}^2 + 2Y_{0,1} - 2Y_{6,1}^2 - Y_{6,1}^3 - 2Y_{6,1} = 0;$

MR7: $-2Y_{0,1}^2 - 2Y_{0,1}^3 + 2Y_{0,1}^2 Y_{7,1} + 2Y_{0,1}Y_{7,1}^2 + 2Y_{0,1} + 2Y_{7,1}^2 - 2Y_{7,1}^3 - 2Y_{7,1} = 0;$

MR8: $Y_{0,1}^2 + Y_{0,1}^3 - Y_{0,1}^2 Y_{8,1} - 2Y_{0,1}Y_{8,1} - Y_{0,1}Y_{8,1}^2 + Y_{0,1} + Y_{8,1}^2 + Y_{8,1}^3 - Y_{8,1} = 0;$