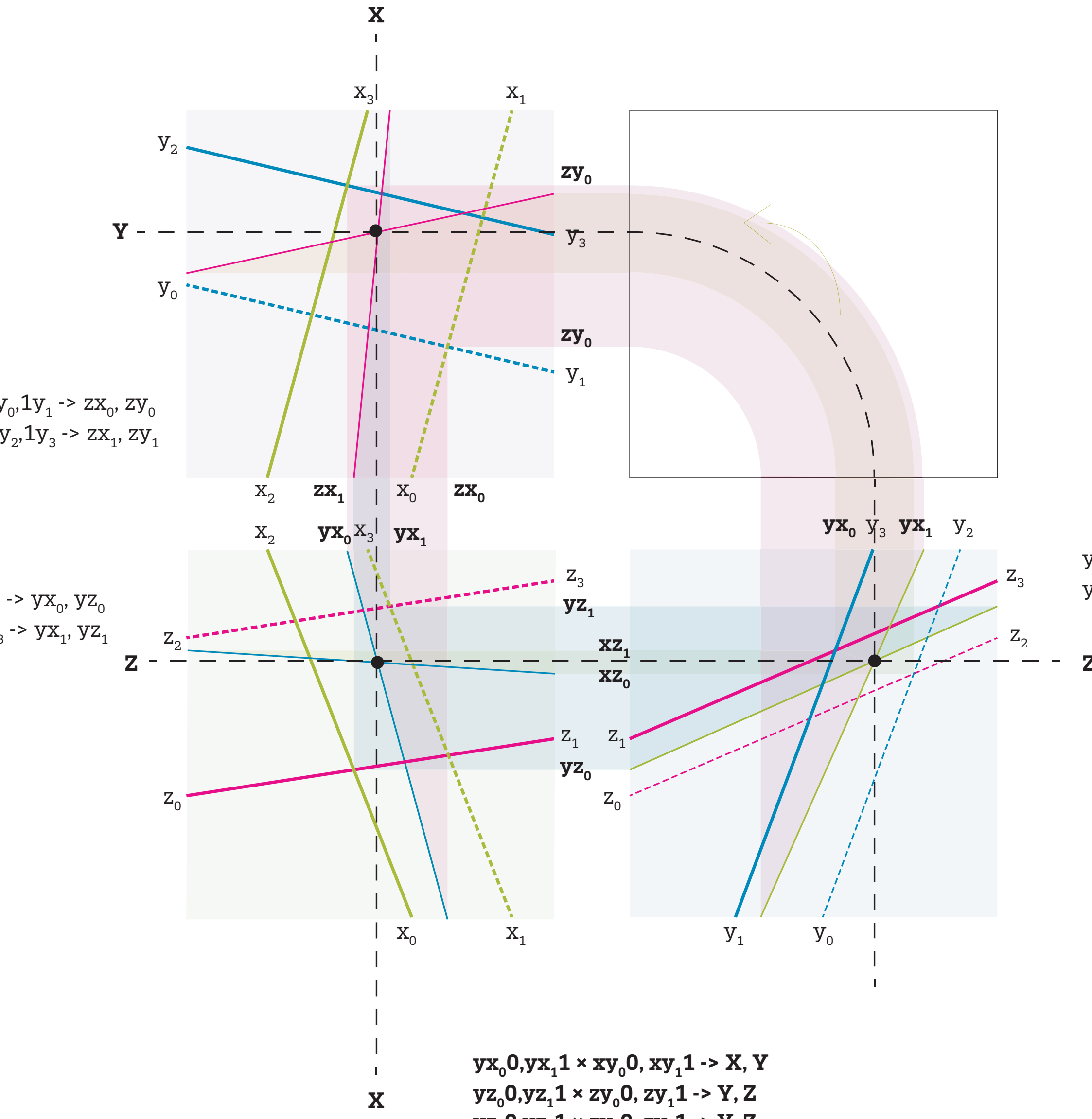
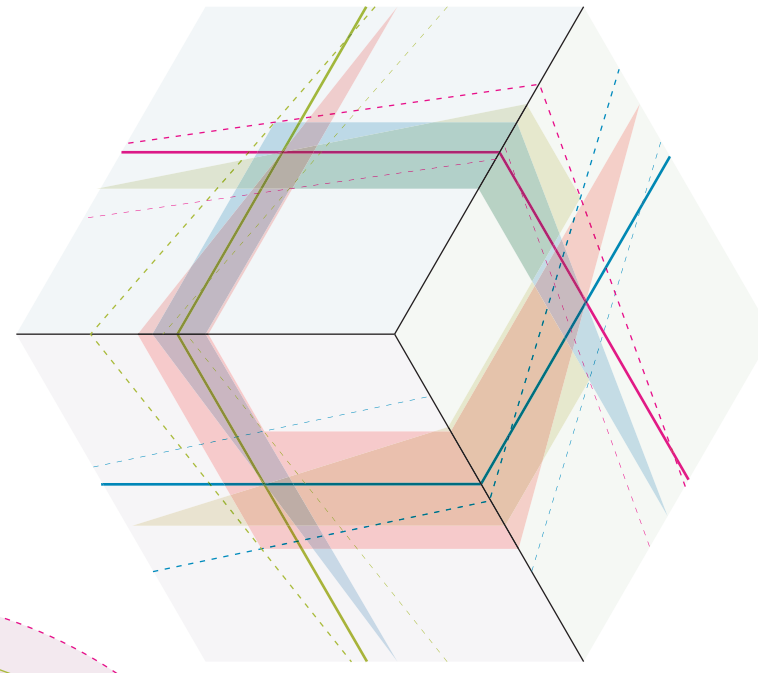

X
x3
x1
y2
zy0
Y
y3
y0
zy0
y1
x2
zx1
x0
zx0
yx0
x3
yx1
z3
yz1
z2
xz1
xz0
Z
z1
yz0
z0
x0
x1
y3
yx0
yx1
y2
z3
z2
z1
z0
y1
y0
X
y0,1y1 -> zx0, zy0
y2,1y3 -> zx1, zy1
-> yx0, yz0
3 -> yx1, yz1
yx00,yx11 × xy00, xy11 -> X, Y
yz00,yz11 × zy00, zy11 -> Y, Z
yz00,yz11 × zy00, zy11 -> Y, Z

It has a sens, but how to extend this idea to 4D?



X=0.6066
x_1=0.5
x_3=0.9
y_1=0.8
z_{x0}=0.38462
z_{y0}=0.61539
y_0=0.5
Y=0.3934
y_3=0.4
z_{x1}=0.69231
z_{y1}=0.30769
y_2=0.1
x_0=0.2
x_2=0.6

0.38461 0.61538
0.69230 0.30769

0.74999 0.50000
0.58035 0.73214

0.145833 0.88541
0.583333 0.54166

X 0.5942 0.5942 (0.0000000)
Y 0.4058 0.4058 (0.0000000)
Z 0.6812 0.6812 (0.0000000)

x_2
x_3
z_0=0.9
y_{x1}=0.5385
y_{z1}=0.8461
z_2=0.8
Z=0.7213
z_1=0.6
z_3=0.5
y_{x0}=0.7118
y_{z1}=0.5292
x_0
x_1

y_2
y_3
z_0
z_1
z_3
y_0
y_1

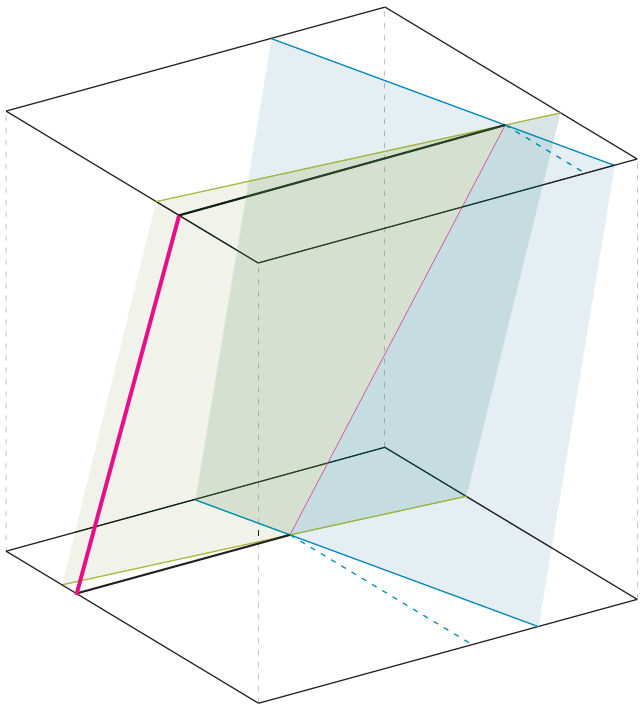
[0.5942028985507247, 0.6811594202898551]
[0.4057971014492754, 0.5942028985507246]
[0.681159420289855, 0.40579710144927544]

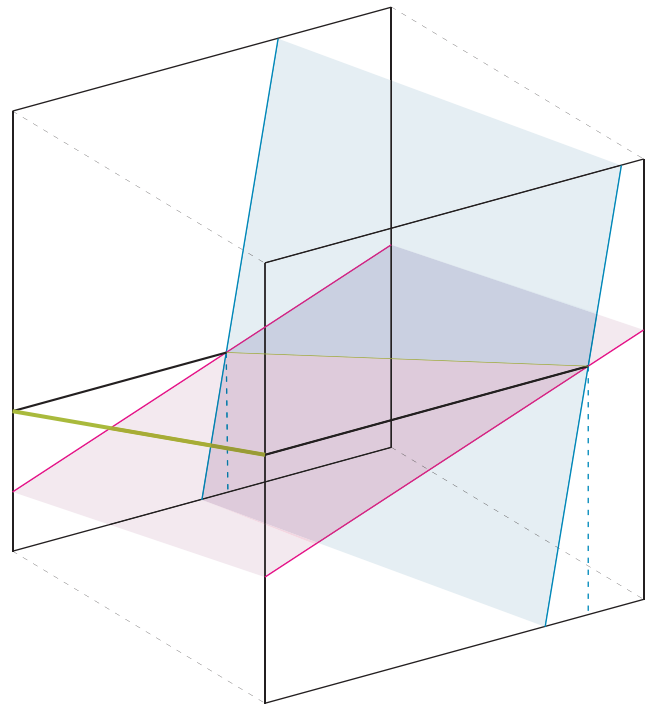
x = 0.6054
y = 0.3957
z = 0.7221

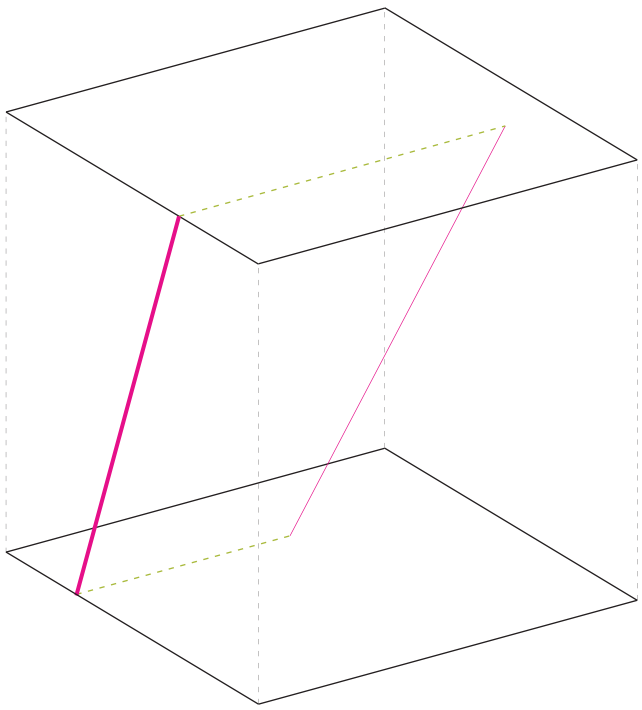
let x = [0.2, 0.5, 0.6, 0.9]
let y = [0.5, 0.8, 0.1, 0.4]
let z = [0.9, 0.6, 0.8, 0.5]

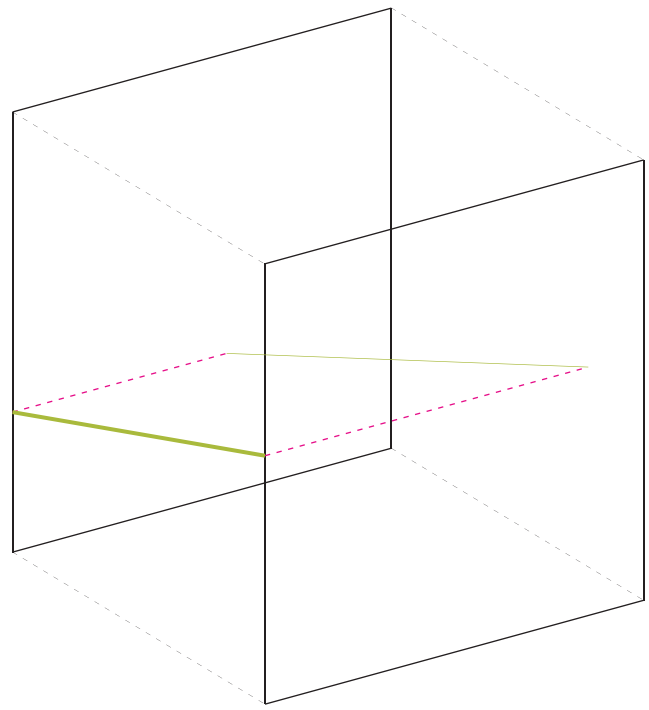
X 0.6066 0.6066 (0.000000)
Y 0.3934 0.3934 (-0.000000)
Z 0.7213 0.7213 (-0.000000)

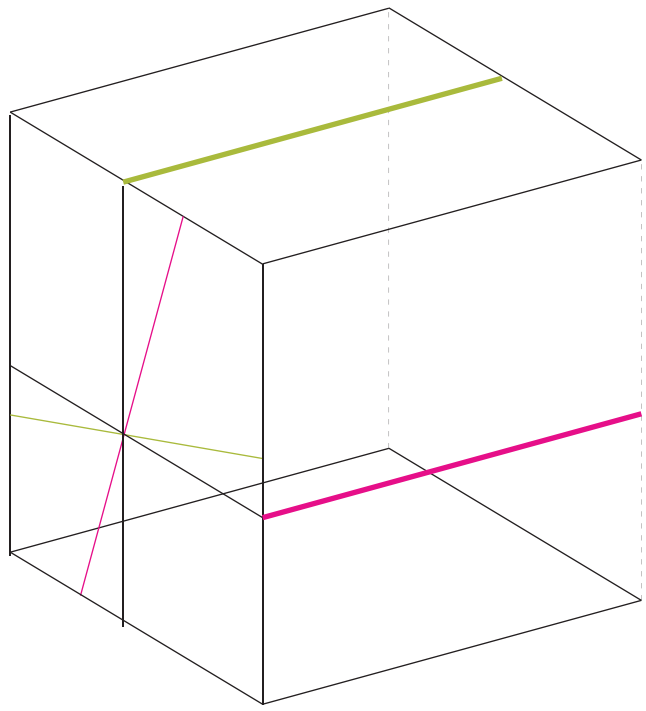
0.2 0.6 0.9 0.6
0.5 0.9 0.8 0.5

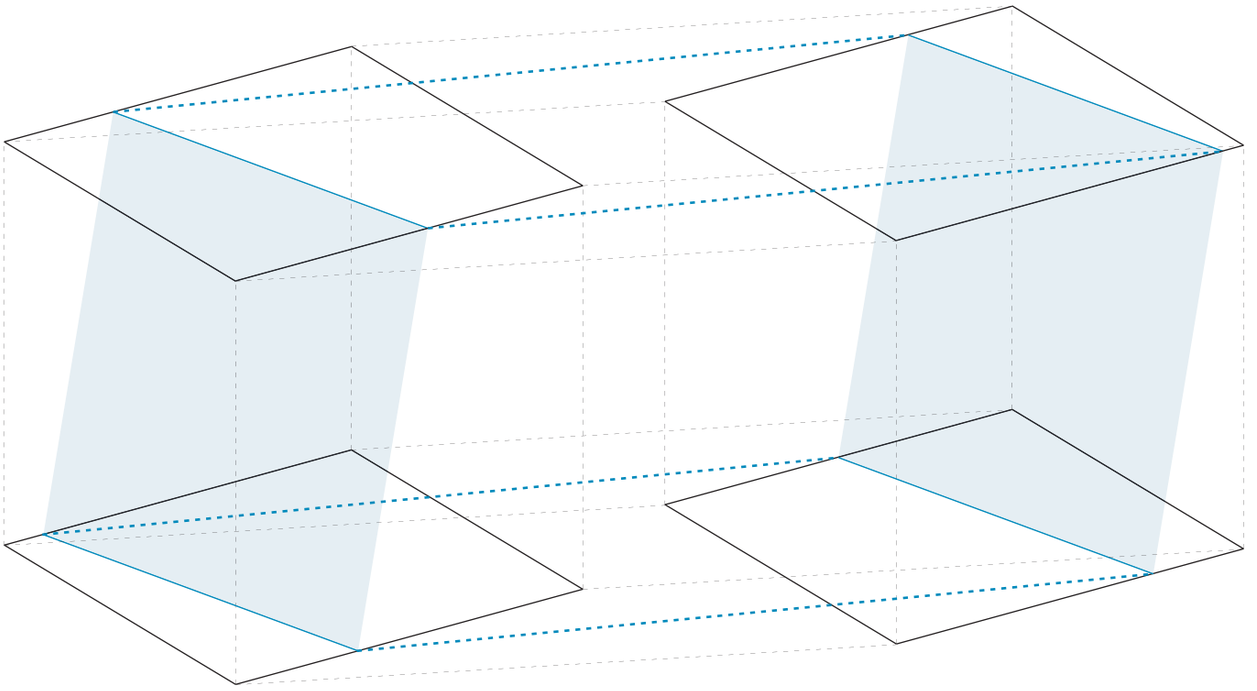


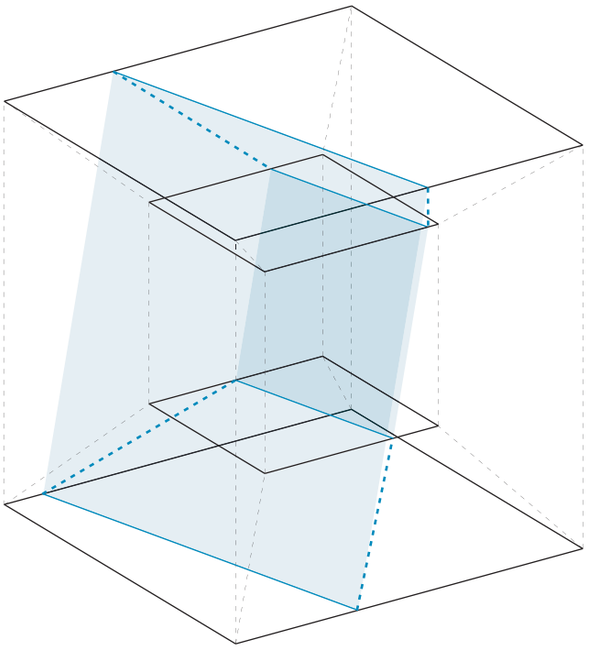


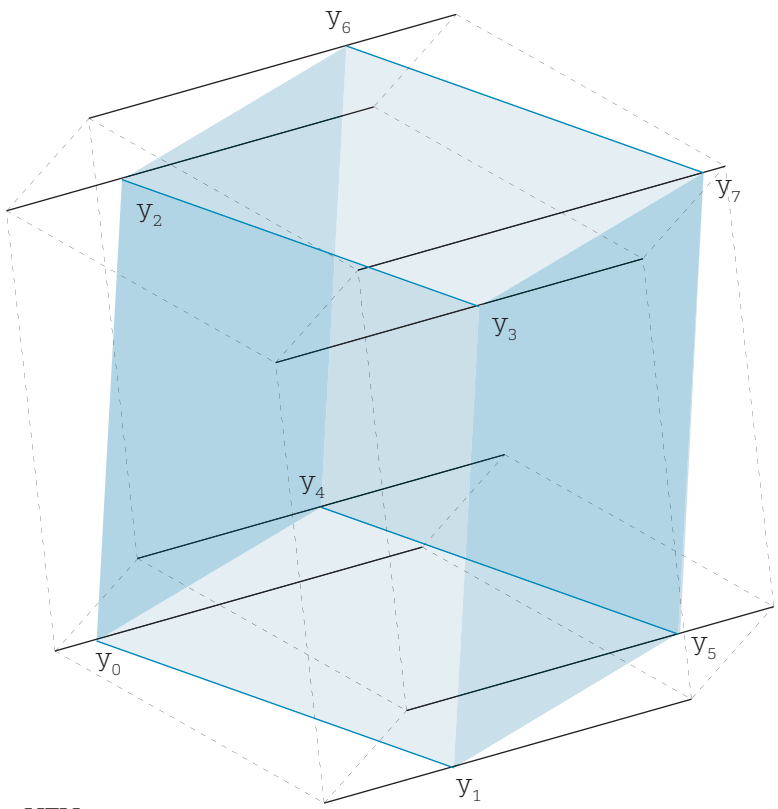




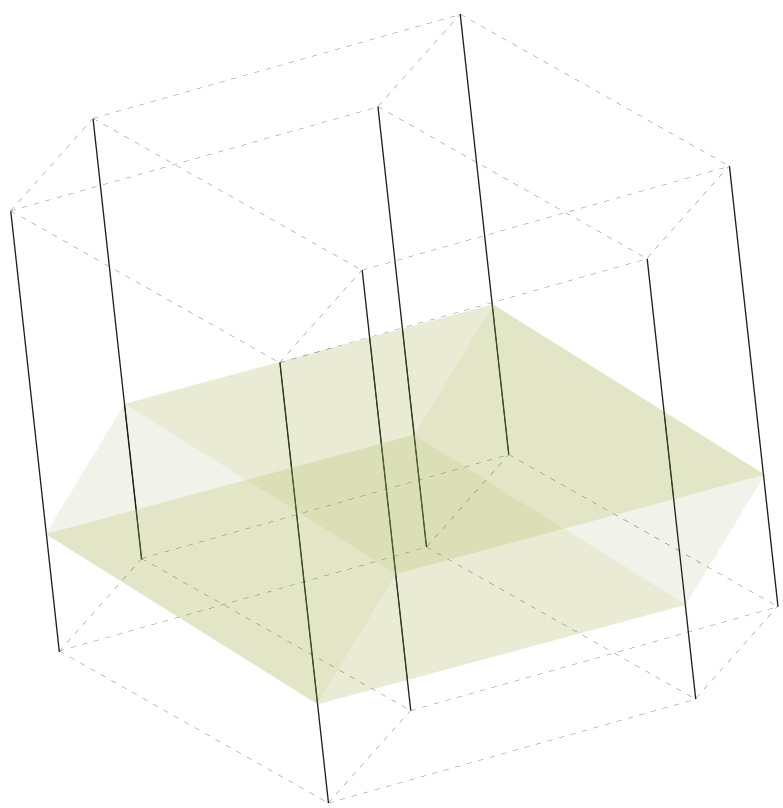




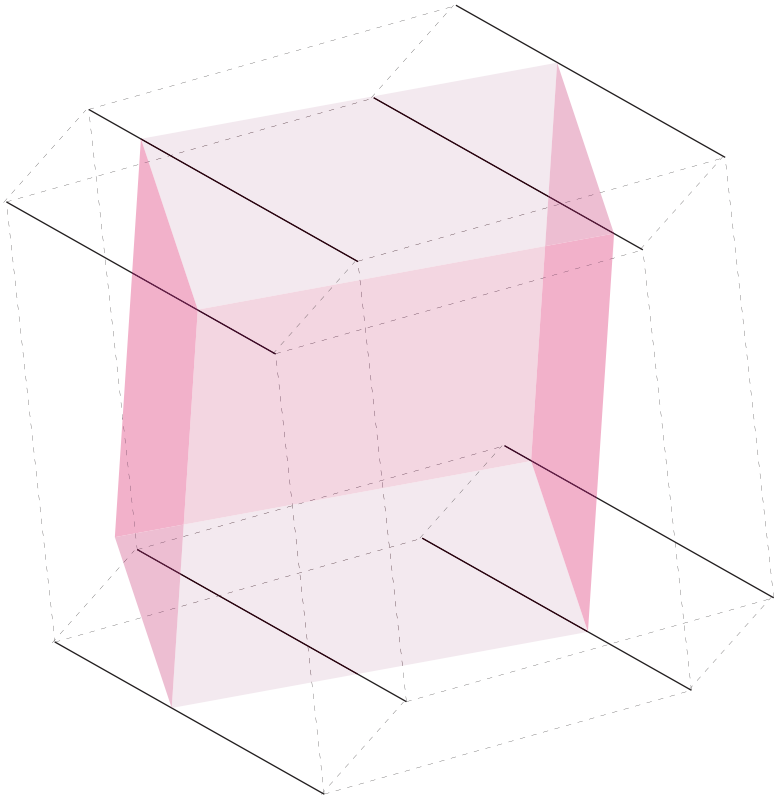




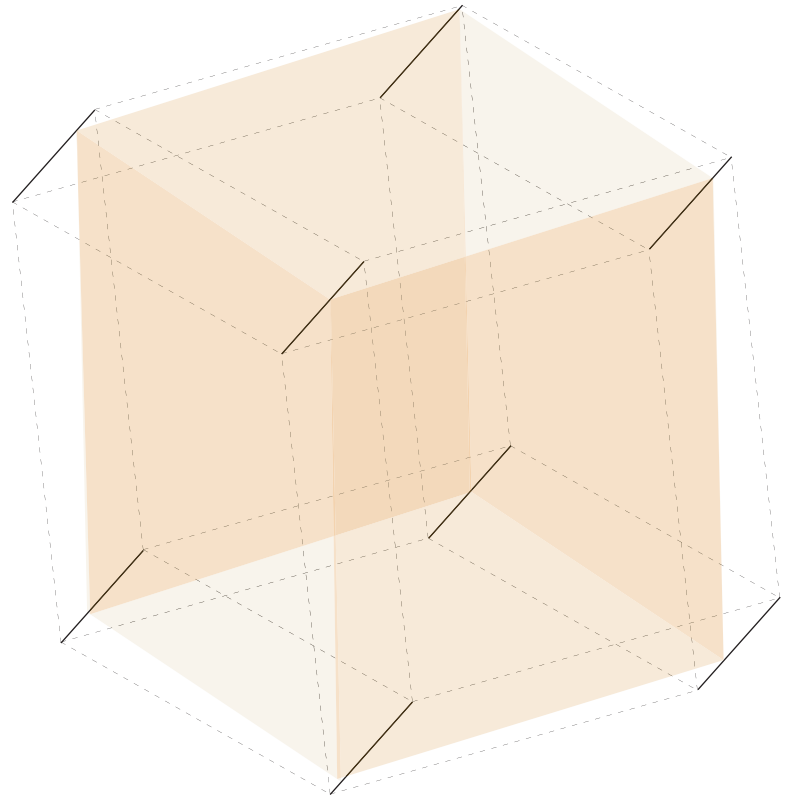
X -> YZV



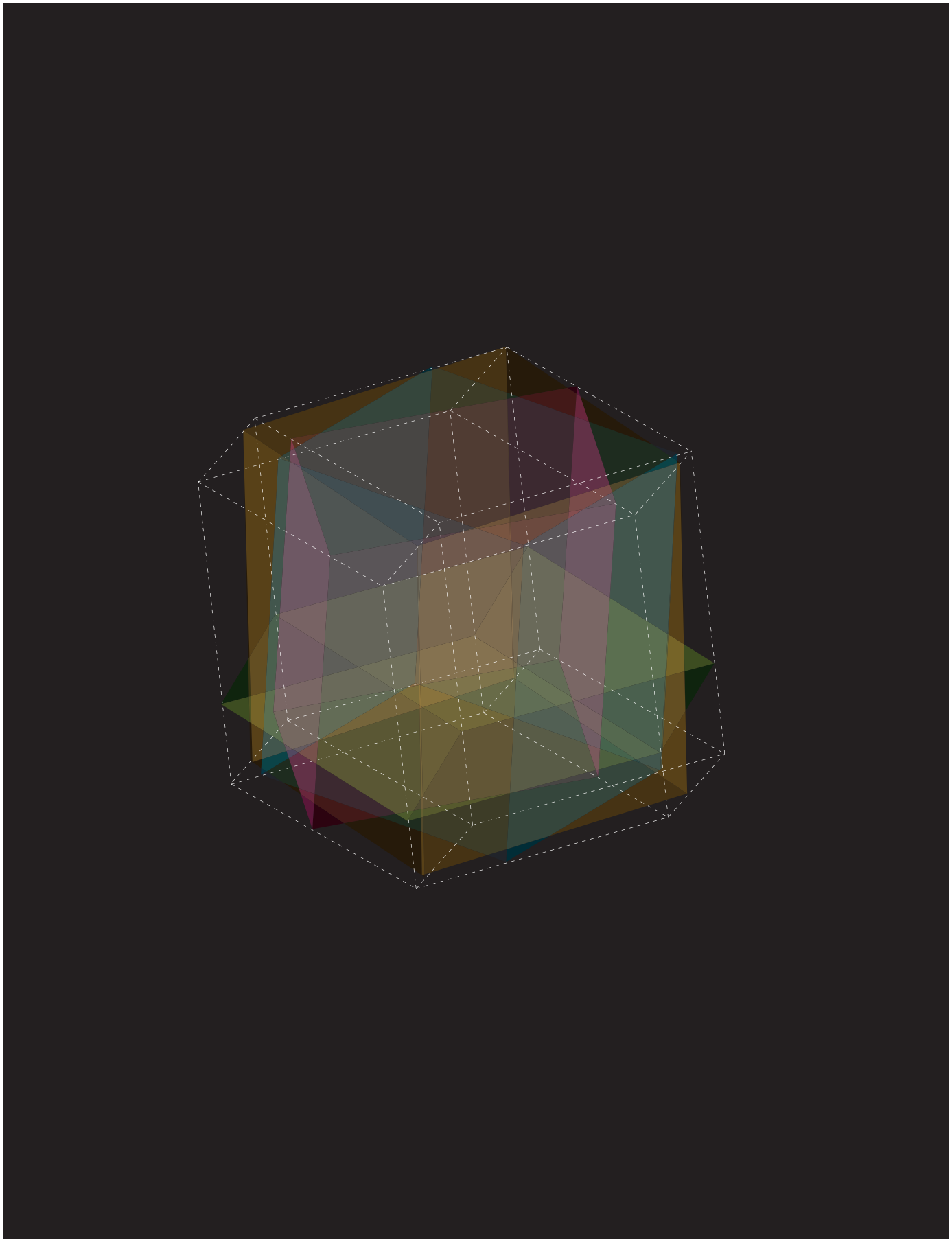
Y -> XZV



Z -> XYV



V -> XYZ



0–1 2–3 × 0–2 1–3 = zx0 zy0
4–5 6–7 × 4–6 5–7

0–2 4–6 × 0–4 2–6 = xy0 xz0
1–3 5–7 × 1–5 3–7

0–4 1–5 × 0–1 4–5 = yz0 yx0
2–6 3–7 × 2–3 6–7

let x = [0.5, 0.7, 0.2, 0.4]
let y = [0.8, 0.6, 0.5 , 0.3]
let z = [0.8, 0.5, 0.6, 0.3]

[0.635 0.673] [0.288 0.442] = [zx_0, zy_0] [zx_1, zy_1] ->
[0.596 0.681] [0.479 0.404] = [xy_0, xz_0] [xy_1, xz_1]
[0.714 0.286] [0.429 0.571] = [yz_0, yx_0] [yz_1, yx_1]

zx0 zx1 ×

zx0 zx1 × zy0, zy1 = XY

[x y] [x y]
[y z] [y z]
[z x] [z x]

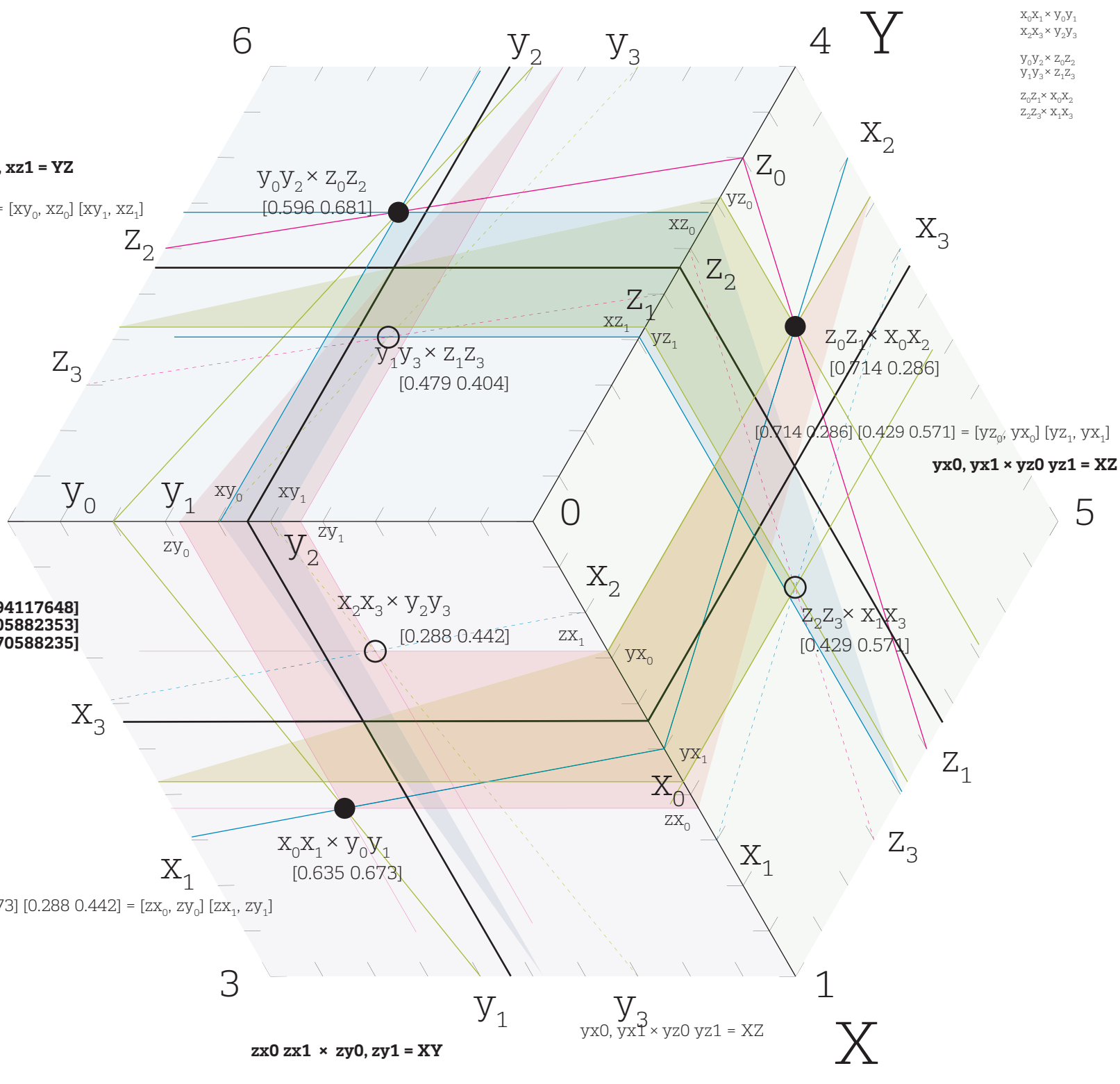
$x_0x_1 \times y_0y_1$
$x_2x_3 \times y_2y_3$

$y_0y_2 \times z_0z_2$
$y_1y_3 \times z_1z_3$

$z_0z_1 \times x_0x_2$
$z_2z_3 \times x_1x_3$

xy0 xy1 × xz0, xz1 = YZ

[0.596 0.681] [0.479 0.404] = [xy_0, xz_0] [xy_1, xz_1]



[0.714 0.286] [0.429 0.571] = [yz_0, yx_0] [yz_1, yx_1]

yx0, yx1 × yz0 yz1 = XZ

[0.635 0.673] [0.288 0.442] = [zx_0, zy_0] [zx_1, zy_1]

X = 0.43864
Y = 0.54367
Z = 0.55865

Y 2

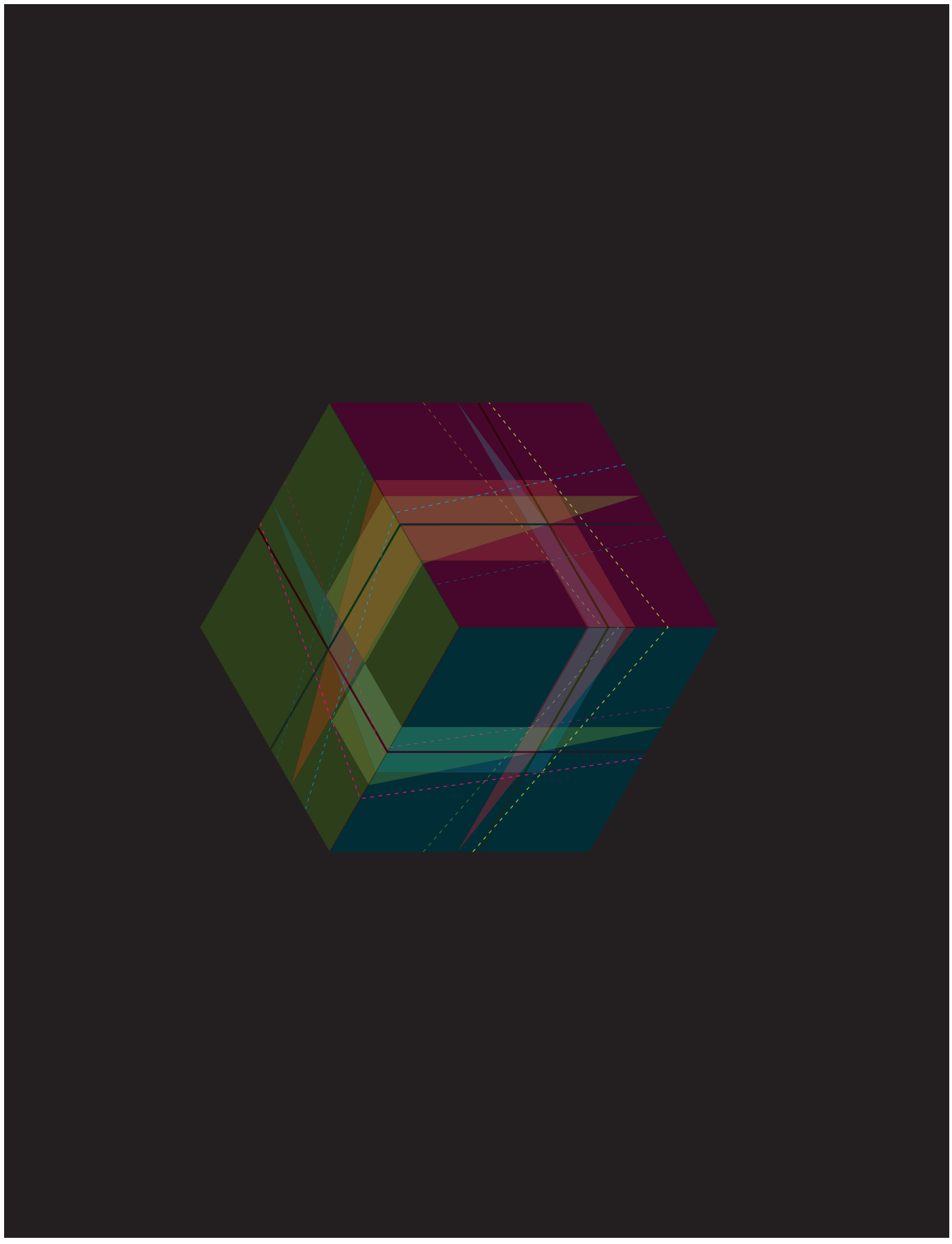
[0.4411764705882353, 0.5588235294117648]
[0.5441176470588235, 0.4411764705882353]
[0.5588235294117647, 0.5441176470588235]

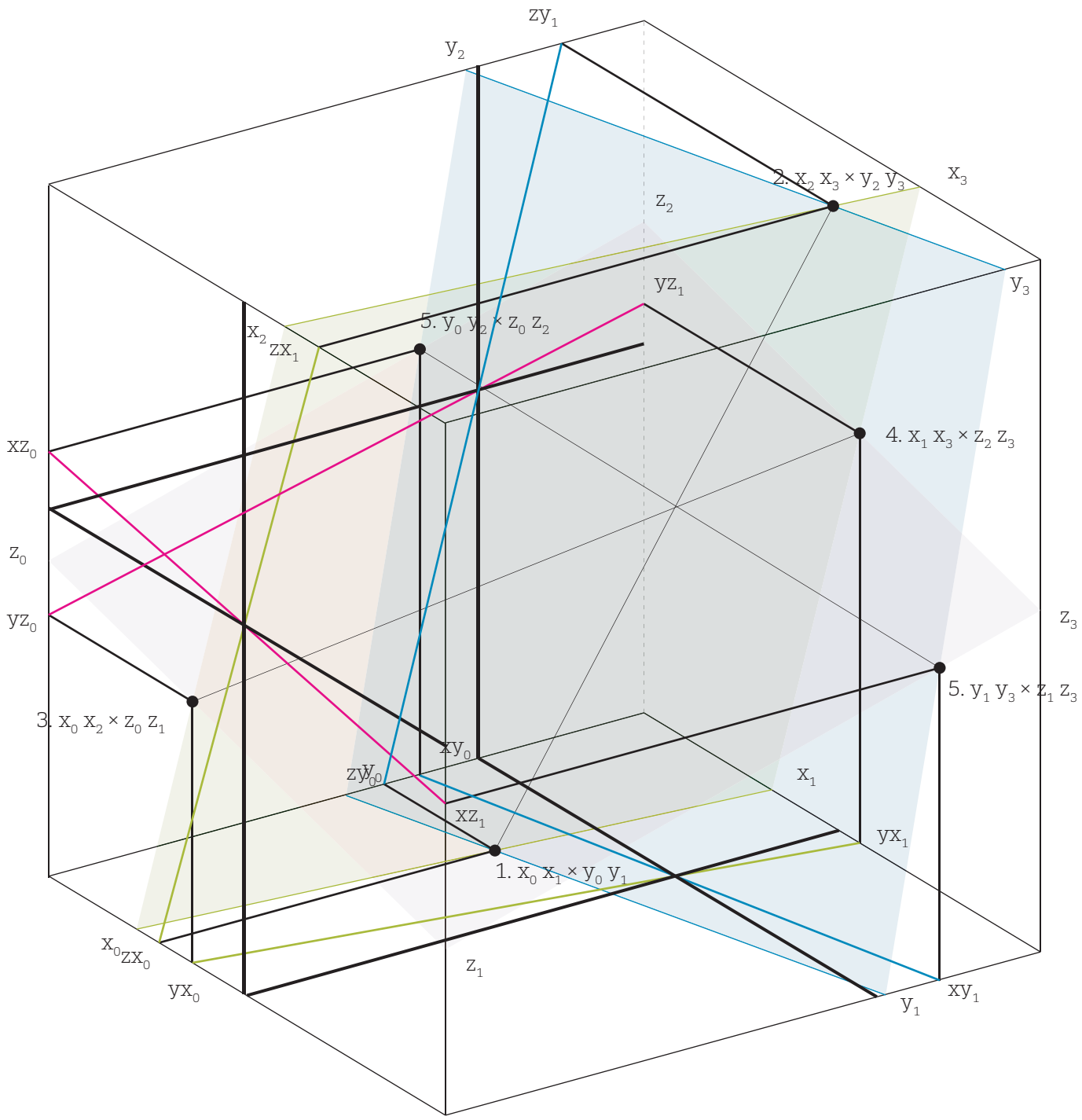
[("x0x1", "y0y1"), ("x2x3", "y2y3")]
[("y0y2", "z0z2"), ("y1y3", "z1z3")]
[("z0z1", "x0x2"), ("z2z3", "x1x3")]

flat: x0x1 y0y1 x2x3 y2y3
coords 0 1 x0x1y0y1 x2x3y2y3
flat: y0y2 z0z2 y1y3 z1z3
coords 1 2 y0y2z0z2 y1y3z1z3
flat: z0z1 x0x2 z2z3 x1x3
coords 2 0 z0z1x0x2 z2z3x1x3

yx0, yx1 × yz0 yz1 = XZ

zx0 zx1 × zy0, zy1 = XY





$x_0x_1\times y_0y_1 = zx_0zy_0$
$x_2x_3\times y_2y_3 = zx_1zy_1$

$x_0x_2\times z_0z_1 = yx_0yz_0$
$x_1x_3\times z_2z_3 = yx_1yz_1$

$y_0y_2\times z_0z_2 = xy_0xz_0$
$y_1y_3\times z_1z_3 = xy_1xz_1$

$zx_0zx_1 \times xz_0xz_1 = XZ$
$yz_0yz_1 \times zy_0zy_1 = ZY$
$xy_0xy_1 \times yx_0yx_1 = YX$

1. 0.0 0.01 0.5 0.51
0.02 0.03 0.52 0.53
0.0 0.02 0.9 0.91
0.01 0.03 0.92 0.93
0.5 0.52 0.9 0.92
0.51 0.53 0.91 0.93

[(0.6346153846153845, 0.673076923076923), (0.2884615384615385, 0.4423076923076923)]

[(0.5957446808510638, 0.6808510638297872), (0.4787234042553191, 0.4042553191489362)]

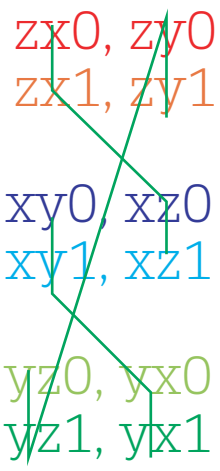
[(0.7142857142857143, 0.2857142857142857), (0.42857142857142855, 0.5714285714285714)]

3D

x0 x1 × y0 y1 -> zx0, zy0
x2 x3 × y2 y3 -> zx1, zy1

y0 y2 × z0 z2 -> xy0, xz0
y1 y3 × z1 z3 -> xy1, xz1

z0 z1 × x0 x2 -> yz0, yx0
z2 z3 × x1 x3 -> yz1, yx1



XZ = zx0 zx1 × xz0 xz1
YX = xy0 xy1 × yx0 yx1
ZY = yz0 yz1 × zy0 zy1

xy0 xy1 × xz0, xz1 = YZ
yz0, yz1 × yx0 yx1 = ZX

0000 0001 0010 0011 => 00.0 01.0
0100 0101 0110 0111 => 01.1 10.0
1000 1001 1010 1011 => 10.1 00.1

4D

[x0x1 y0y1] [x2x3 y2y3] [x4x5 y4y5] [x6x7 y6y7]
[y0y2 z0z2] [y4y6 z4z6] [y1y3 z1z3] [y5y7 z5z7]
[z0z4 v0v4] [z1z5 v1v5] [z2z6 v2v6] [z3z7 v3v7]
[v0v1 x0x4] [v2v3 x1x5] [v4v5 x2x6] [v6v7 x3x7]