1.
    1. Subdivisland
    2. Lines 1 and 2, maybe line 5
    3. Perlin Noise
    4.
2.
    1. PushTransform()

       translate(0, 4)

       plate()

       PopTransform()

       PushTransform()

       translate(-5, 0)

       fork()

       translate(-2, 0)

       fork()

       PopTransform()

       PushTransform()

       translate(5, 0)

       knife()

       translate(2, 0)

       spoon()

       PopTransform()

    2. I think there are two ways this can be done:

i. PushTransform()

scale(3, 3)

translate(-4, -4)

table()

scale(⅓, ⅓)

PushTransform()

translate(12, 1)

placeSetting()

PopTransform()

PushTransform()

translate(12, 23)

rotate(180)

placeSetting()

PopTransform()

PopTransform()

ii. PushTransform()

scale(3, 3)

translate(-4, -4)

table()

PopTransform()

PushTransform()

translate(0, -11)

placeSetting()

PopTransform()

PushTransform()

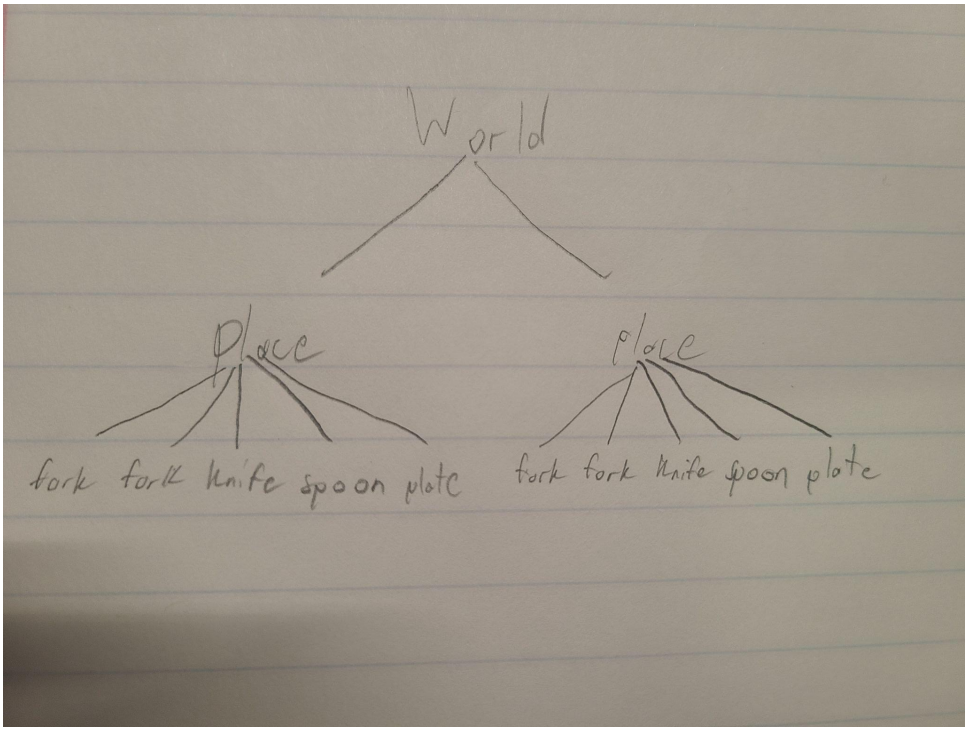
rotate(180)

translate(0, -11)

placeSetting()

PopTransform()

3.



3.

1. $p_0 = p(0) = 0t^2 + 0t + c = c$

   $2(p_2 - p_1) = p'(1) = 2(1)t + b = 2a + b$

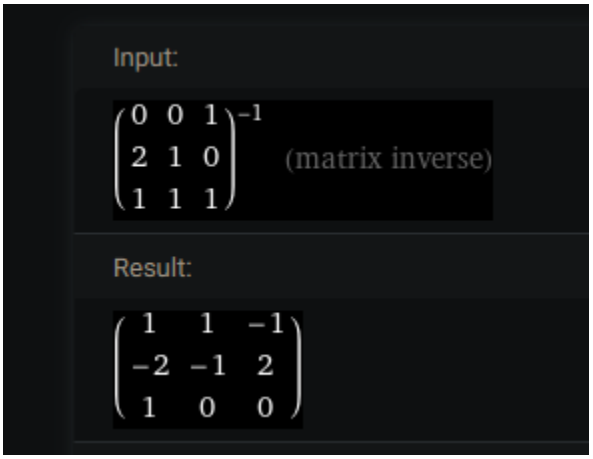
   $p_2 = p(1) = a + b + c$

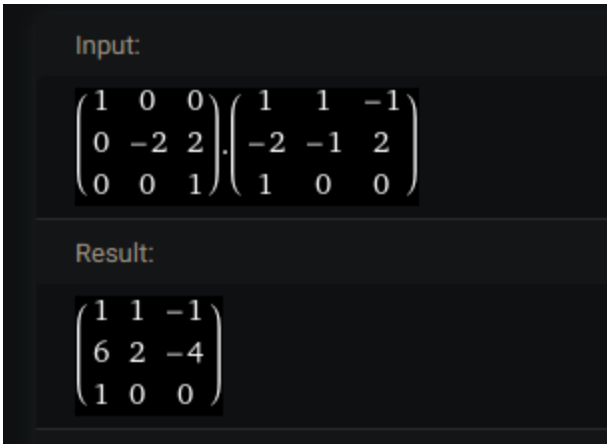
2. Left matrix:

1	0	0
0	-2	2
0	0	1

   Right Matrix:

0	0	1
2	1	0
1	1	1

3. 



$B_0^2(t) = t^2 + 6t + 1$

$B_1^2(t) = t^2 + 2t = t(t + 2)$

$B_2^2(t) = -t^2 - 4t = -t(t + 4)$

4. $p_0 = p(0) = 0t^2 + 0t + c = c$

   $2(p_2 - p_1) = p'(1) = 2(1)a + b = 2a + b$

   $p_2 = p(1) = a + b + c$

   $c = p_0$

   $b = 2(p_2 - p_1) - 2a$

   $a = p_2 - b - c$

   $a = p_2 - (2(p_2 - p_1) - 2a) - p_0$

   $a = -p_2 + 2p_1 + 2a - p_0$

   $-a = -p_2 + 2p_1 + 2a - p_0$

   $a = p_2 - 2p_1 + p_0 = p_0 - 2p_1 + p_2$

   $b = 2(p_2 - p_1) - 2(p_0 - 2p_1 + p_2)$

   $b = 2p_2 - 2p_1 - 2p_0 + 4p_1 - 2p_2$

   $b = - 2p_0 + 2p_1t$

For cubic:

$p(t) = xt^3 + at^2 + bt + c$

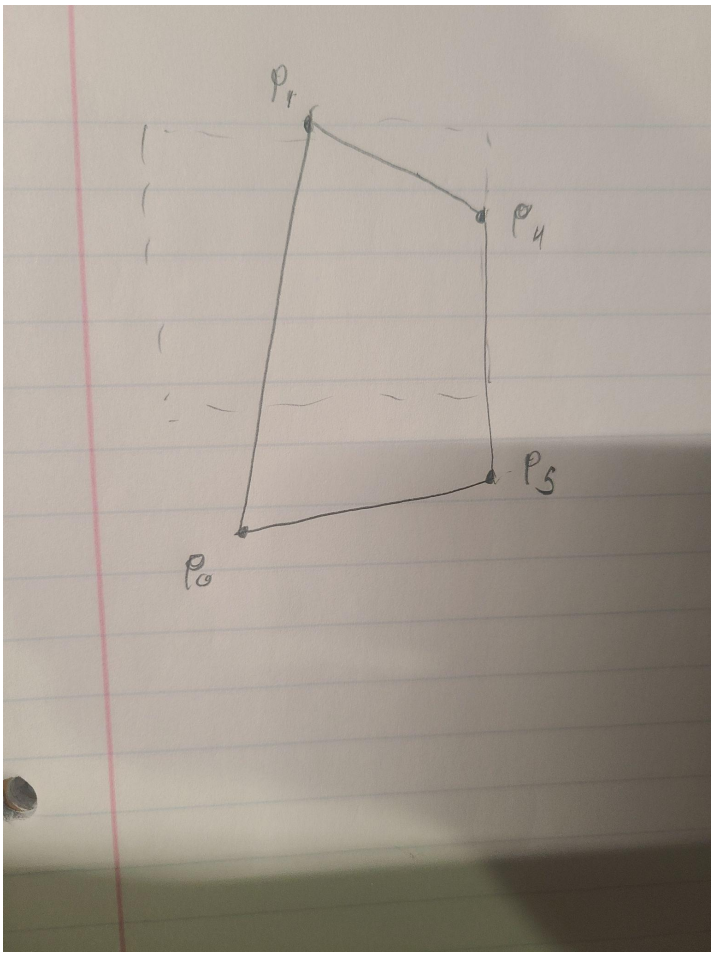
$p'(t) = 3xt^2 + 2at + b$

$p''(t) = 6xt + 2a$

Left Matrix

4.

1.



2. p_1 -> p_2: m = (1 - 0) / (0 - 2) = -½, b = 1

   p_4: y = -1/2x + 1 = -½ * 1 + 1 = ½

   p_4 = (1, ½)

p_0 -> p_3: m = (-2 + 1) / (-.5 - 2.5) = ⅓, b = 5.5/3

p_5: y = 1/3x - 5.5/3 = 1/3 * 1 - 5.5/3 = -3/2

p_5 = (1, -3/2)

3. p_5, p_0, p_1, p_4