

## Assigned homework #2

1. Let

$$\gamma(t) = (t, t^2), \quad 0 \leq t \leq 1,$$

$$\eta(t) = (2t + 1, t^3 + 4t + 1), \quad 0 \leq t \leq 1,$$

Note that  $\gamma(1)$  and  $\eta(0)$  intersect at  $(1, 1)$ .

- Program to draw  $\gamma(t)$  and  $\eta(t)$ .
- Do  $\gamma(t)$  and  $\eta(t)$  meet with  $C^1$  continuity at the intersection?
- Do  $\gamma(t)$  and  $\eta(t)$  meet with  $G^1$  continuity at the intersection?

2. Let  $t_0 = 0, t_1 = 1, t_2 = 3, t_3 = 4, t_4 = 5$ . Using these values, compute  $B_{0,4}$  and each of the functions used in its definition. Then plot these functions on the interval  $-3 \leq t \leq 8$ .

Submission:

1. Source code.
2. Report your answer.

All above files should be named as “**Name\_StudentNo\_AssignmentNo.zip**”

Please upload your files in Canvas.

**Attention: Late submission will be scored less grade.**