Computer Graphics I

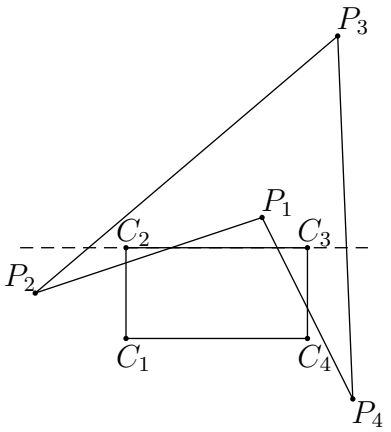
Assignment 10

Group III (Yavor Kaloyanov)

Jan Hendrik Dithmar
2031259

Pascal Gwosdek
2505221

10.1 Clipping



Given:

$$C_1 = (0,0), C_2 = (0,6), C_3 = (12,6), C_4 = (12,0)$$

and

$$P_1 = (9,8), P_2 = (-6,3), P_3 = (14,20), P_4 = (15,-4)$$

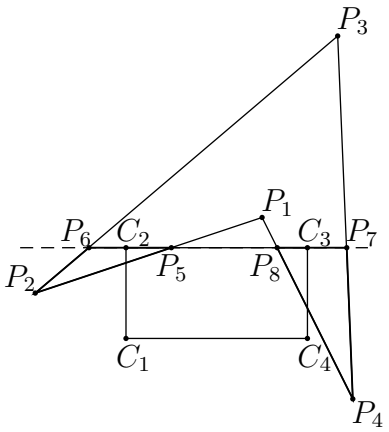
Clipping against top edge: we start with P_1 and P_2

- P_1 and P_2:
  P_1 outside, P_2 inside
  P_5 = intersection at $\overline{P_1P_2}$ with straight through C_2, C_3 polygon points $\{P_5, P_2\}$.

- P_2 and P_3:
  P_2 inside, P_3 outside
  P_6 = intersection at $\overline{P_2P_3}$ with straight through C_2, C_3 polygon points $\{P_5, P_2, P_6\}$.

- P_3 and P_4:
  P_3 outside, P_4 inside
  P_7 = intersection at $\overline{P_3P_4}$ with straight through C_2, C_3 polygon points $\{P_5, P_2, P_6, P_7, P_4\}$.

- P_4 and P_1:
  P_4 inside, P_1 outside
  P_8 = intersection at $\overline{P_4P_1}$ with straight through C_2, C_3 polygon points $\{P_5, P_2, P_6, P_7, P_4, P_8\}$.


P_3
P_1
P_6
C_2
C_3
P_7
P_2
P_5
P_8
C_1
C_4
P_4