

P_1, P_2, P_3, P_4 の座標を $(P_1, g_1), (P_2, g_2), (P_3, g_3), (P_4, g_4)$ とおく

$$(P_1, g_1) = \left(\frac{P_4}{2}, \frac{g_4+2}{2} \right)$$

$$(P_2, g_2) = \left(\frac{P_1}{2}, \frac{g_1}{2} \right)$$

$$(P_3, g_3) = \left(\frac{P_2+1}{2}, \frac{g_2}{2} \right)$$

$$(P_4, g_4) = \left(\frac{P_3+2}{2}, \frac{g_3+2}{2} \right)$$

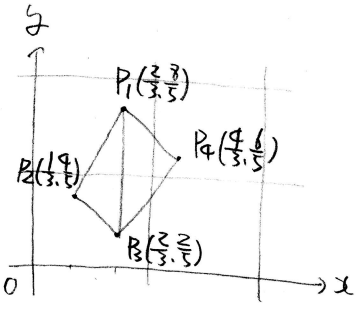
$$\begin{cases} 2P_1 = P_4 \\ 2P_2 = P_1 \\ 2P_3 = P_2 + 1 \\ 2P_4 = P_3 + 2 \end{cases} \quad P_1 = \frac{1}{2}P_4 = \frac{1}{2}\left(\frac{1}{2}P_3+1\right) = \frac{1}{4}\left(\frac{1}{2}P_2+\frac{1}{2}\right) + \frac{1}{2} = \frac{1}{8}\frac{1}{2}P_1 + \frac{5}{8} = \frac{1}{16}P_1 + \frac{5}{8}, \quad \frac{15}{16}P_1 = \frac{5}{8}, \quad P_1 = \frac{2}{3}$$

$$\begin{cases} 2P_3 = P_2 + 1 \\ 2P_4 = P_3 + 2 \end{cases} \quad P_2 = \frac{1}{2}\frac{2}{3} = \frac{1}{3}, \quad P_3 = \frac{1}{2}\frac{1}{3} + \frac{1}{2} = \frac{2}{3}, \quad P_4 = \frac{4}{3}$$

$$\begin{cases} 2g_1 = g_4 + 2 \\ 2g_2 = g_1 \\ 2g_3 = g_2 \\ 2g_4 = g_3 + 2 \end{cases} \quad g_1 = \frac{1}{2}\left(\frac{1}{2}g_3+1\right) + 1 = \frac{1}{4}\frac{1}{2}g_2 + \frac{3}{2} = \frac{1}{8}\frac{1}{2}g_1 + \frac{3}{2} = \frac{1}{16}g_1 + \frac{3}{2}, \quad \frac{15}{16}g_1 = \frac{3}{2}, \quad g_1 = \frac{8}{5}$$

$$\begin{cases} 2g_2 = g_1 \\ 2g_3 = g_2 \\ 2g_4 = g_3 + 2 \end{cases} \quad g_2 = \frac{1}{2}\frac{8}{5} = \frac{4}{5}, \quad g_3 = \frac{1}{2}\frac{4}{5} = \frac{2}{5}, \quad g_4 = 2\frac{2}{5} - 2 = \frac{6}{5}$$

よって $P_1 \left(\frac{2}{3}, \frac{8}{5}\right), P_2 \left(\frac{1}{3}, \frac{4}{5}\right), P_3 \left(\frac{2}{3}, \frac{2}{5}\right), P_4 \left(\frac{4}{3}, \frac{6}{5}\right)$



□ 四角形 $P_1P_2P_3P_4$ の面積は $\frac{6}{5} \cdot \frac{1}{2} = \frac{3}{5}$