R Y G

2) แดง 1 , เหลือง 2 , เขียว 3

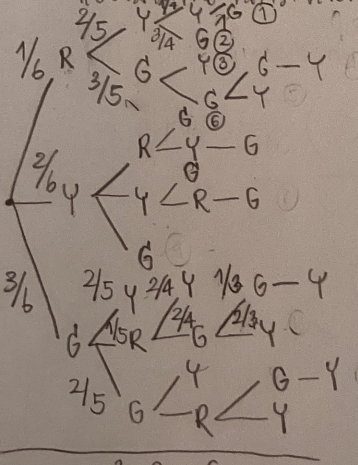
กรณีที่ 1

2.1) เขียว 2 ลูก $P_{GG} = \frac{\binom{3}{2}}{\binom{5}{2}} = \frac{\frac{3!}{2!1!}}{\frac{5!}{3!2!}} = \frac{3\times2\times3\times2}{5\times4\times3\times2} = \frac{3}{10}$

กรณีที่ 2

แดงหนึ่งลูก $P_R = \frac{\binom{1}{1}}{\binom{5}{2}} = \frac{1}{\frac{5\times4\times3!}{3!\times2}} = \frac{1}{10}$

2.2) PMF $P_Y(y)$ เมื่อ Y คือ RV ของจำนวนครั้งที่ใช้ในการเบิกลูกบอลครั้งละหนึ่งลูก แบบไม่ใส่คืน จนกว่าจะได้ เหลือง & เขียว อย่างน้อยสี่ละลูกอย่างละ



① $P[RYYG] = \frac{1}{6}\times\frac{2}{5}\times\frac{1}{4}\times1 = \frac{2}{120}$

② $P[RYG] = \frac{1}{6}\times\frac{2}{5}\times\frac{3}{4} = \frac{6}{120}$

③ $P[RGY] = \frac{1}{6}\times\frac{3}{5}\times\frac{3}{4} = \frac{6}{120}$

④ $P[RGGGY] = \frac{1}{6}\times\frac{3}{5}\times\frac{2}{4}\times\frac{1}{3}\times1 = \frac{6}{360}$

⑤ $P[RGGGY] = \frac{1}{6}\times\frac{3}{5}\times\frac{2}{4}\times\frac{2}{3} = \frac{12}{360}$

⑥ $P[YRG] = \frac{3}{6}\times\frac{1}{5}\times\frac{3}{4} = \frac{6}{120}$

⑦ $P[YRYG] = \frac{3}{6}\times\frac{1}{5}\times\frac{1}{4} = \frac{2}{120}$

⑧ $P[YYG] = \frac{3}{6}\times\frac{1}{5}\times\frac{3}{4} = \frac{6}{120}$

⑨ $P[YYRG] = \frac{3}{6}\times\frac{1}{5}\times\frac{1}{4}\times1 = \frac{2}{120}$

⑩ $P[YG] = \frac{2}{6}\times\frac{3}{\quad} = 6$

① $P[GY] = \frac{3}{6}\times\frac{2}{5} = \frac{6}{30}$

② $P[GRY] = \frac{3}{6}\times\frac{1}{5}\times\frac{2}{4} = \frac{6}{120}$

③ $P[GRGGY] = \frac{3}{6}\times\frac{1}{5}\times\frac{2}{4}\times\frac{1}{3}\times1 = \frac{6}{360}$

④ $P[GRGGY] = \frac{3}{6}\times\frac{1}{5}\times\frac{2}{4}\times\frac{2}{3} = \frac{12}{360}$

⑤ $P[GGY] = \frac{3}{6}\times\frac{2}{5}\times\frac{2}{4} = \frac{12}{120}$