Connection hot MAP:

Exercice 1:

As Roi.

1.1) $C_4^3 C_{28}^2$ 1.3) $C_4^2 C_4^2 C_{24}^1 = 6 \times 6 \times 24$

1.2) $C_4^4 C_{28}^1$ 1.4) $4^5 = 1024$. 1.5) $8 \times 28 = 224$

1.6) $C_4^2 C_{30}^3 = 6 \cdot \frac{30!}{27!3!} = 6 \times \frac{30 \times 29 \times 27}{6}$

Exercice 2:

x_i	p_i	g_i
0	0,5787	-1
1	0,3472	1
2	0,0694	2
3	0,0046	3

$E(X) = -\frac{17}{216} \approx -0,0787$

$\sigma' = \sigma^2 - \mu^2 \quad E(G') = E(G^2) - \mu^2$

$(= \mathrm{Var}(G))$

$= 1,245$

Exercice 3:

1) $\Omega = \{(G,G), (G,F), (F,G), (F,F)\}$

$p(A) = \frac{2}{4} (= GF\ FG)$

$p(B) = \frac{3}{4} (= GG, GF, FF)$

$p(A \cap B) = \frac{2}{4}$

$\neq$

$p(A) \times p(B)$

donc A et B ne sont pas indépendants

2) $\Omega' = \{(a,b,c), a,b \in \{F,G\}, c \in \{3\}\}$ card $(\Omega') = 8$.

$p(A) = 1 - \frac{2}{8} = \frac{6}{8}$ | $p(A \cap B) = p(\text{"1 fille"}) = \frac{3}{8}$

$p(B) = \frac{4}{8}$ | $p(A) \times p(B) = \frac{6}{8} \times \frac{3}{2} \times \frac{4}{8} = 3/8$