①

1. $P_A(R) = \frac{112}{176}$ $\qquad$ $P_R(A) = \frac{34+27}{95+65} = \frac{61}{160}$

2. $P_P(A) = P_{\overline{RUE}}(A) = \frac{34}{95}$

1.1. $P_E(V) = \frac{7}{20}$ $\qquad$ $P_V(E) = \frac{7}{16}$ $\qquad$ $P_{\overline{E}}(V) = \frac{11}{19}$

1.1. $P(E) = \frac{20}{39}$

1.3 $P_E(\overline{V}) = \frac{13}{20}$

2.

1. $P_R(T_4) = \frac{74}{121}$ $\qquad$ $P_{T_4}(V) = \frac{68}{228}$ $\qquad$ $P_{\overline{T_4}}(\overline{V}) = \frac{97+104}{281} = \frac{198}{281}$
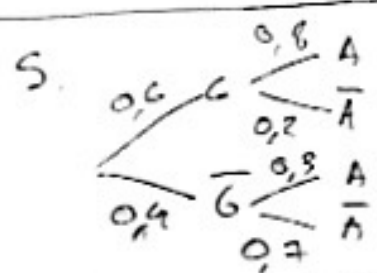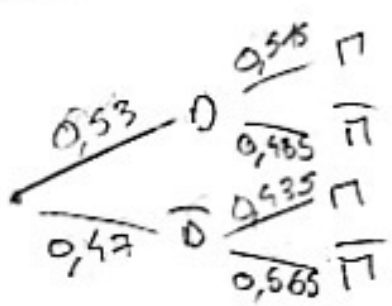
2. $P_{T_2}(\overline{RUV}) = \frac{86}{228}$

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② $\quad P(G \cap A) = P(G) \times P_G(A) = 0,6 \times 0,8 = 0,48$

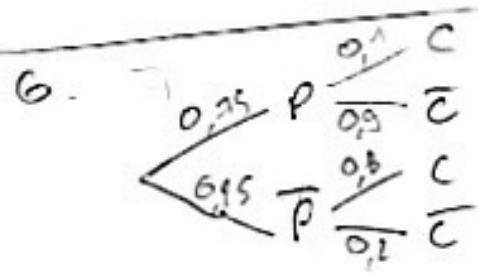3. $\quad P(C \cap B) = P(C) \times P_C(B) = 0,3 \times 0,45 = 0,135$

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4 $\quad P_{\overline{C}}(B) = \frac{0,245}{0,7}$ $\qquad\qquad$ $P(\overline{C} \cap B) = 0,245$

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③

5.

$P(A) = P_G(A) + P_{\overline{G}}(A) =$
$\qquad\qquad 0,48 + 0,12 = 0,6$

6.

$P(\overline{C}) = P_P(\overline{C}) + P_{\overline{P}}(\overline{C})$
$\qquad = 0,675 + 0,05 = 0,725$

(6)

1. Car pas synchronisés

2.

	V_1	$\overline{V_1}$
V_2	0,18	0,22
$\overline{V_2}$	0,27	0,33

0,45 V_1 0,4 V_2 0,6 $\overline{V_2}$
0,55 $\overline{V_1}$ 0,4 V_2 0,6 $\overline{V_2}$

7.

1. Car remise

2.

$\frac{6}{10}$ R $\frac{5}{10}$ B $\frac{5}{10}$ $\overline{B}$
$\frac{4}{10}$ $\overline{R}$ $\frac{4}{10}$ B $\frac{6}{10}$ $\overline{B}$
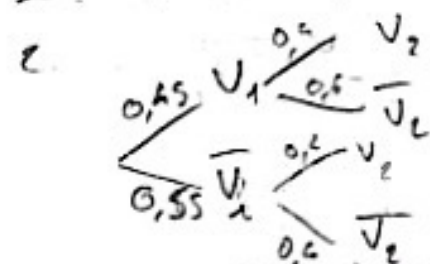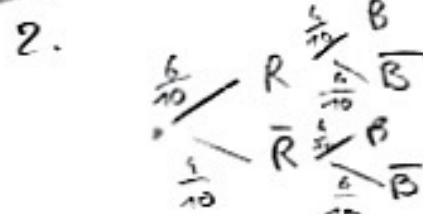
8.

1. Aucun lien

2.

Normale = N   P = pile
Truquée = T   F = face

0,5 F_N 0,7 F_T 0,3 $\overline{F_T}$
$\overline{F_N}$ 0,7 F_T 0,3 $\overline{F_T}$
0,5 $\overline{F_N}$

10,21, 25, 30, 35, 40, 44, 87

---

21. $P_\Omega(A) = 1$

ou 88 sachant qu'il st inférieur ou égal à 50.

2. a) $P_A(B)$ b) $P_{\overline{B}}(\overline{A})$

3. $P_{A \cap B}(\overline{B} \cap \overline{A})$

20.
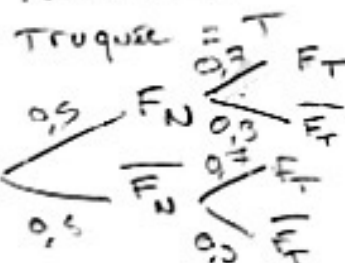
1. La probabilité que le nombre soit 4,76

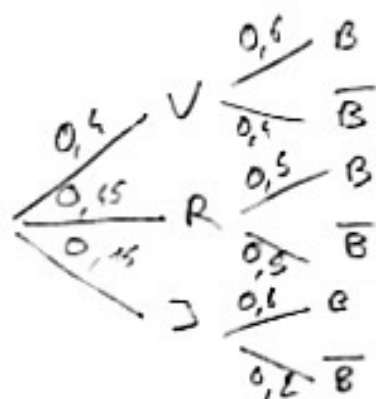25. 3 rouge (A,B,C) 4 blancs (D,E,F,G,H,I,J)

a) $P_B(V) = \frac{2}{7}$ b) $P_R(n) = \frac{1}{3}$

30.

1. $P(F \cap C) = \frac{1}{24}$ $P(C) = \frac{5}{24}$

2. $P_C(F) = \frac{P(F \cap C)}{P(C)} = \frac{\frac{1}{24}}{\frac{5}{24}} = \frac{1}{24} \times \frac{24}{5} = \frac{24}{120} = \frac{1}{5}$

34

1

2. $P(J \cap B) = P(J) \times P_J(B) = 0,15 \times 0,8$
$= 0,12$

3. $P(B) = 0,585$
$P(\overline{B}) = 0,415$

40

a) $P(B \cap D) = \frac{8}{24} = \frac{1}{3}$

$P(B) = \frac{13}{24}$

$P(D) = \frac{16}{24}$

$\frac{13}{24} \times \frac{16}{24} = \frac{208}{576} = \frac{13}{36}$

Non, pas indépendants

b) $P(R \cap \overline{D}) = \frac{0}{24}$

$P(R) = \frac{2}{24}$

$P(\overline{D}) = \frac{8}{24}$

Non, pas indépendants

c) $P(N \cap D) = \frac{6}{24} = \frac{1}{4}$

$P(N) = \frac{9}{24}$

$P(D) = \frac{16}{24}$

$\frac{9}{24} \times \frac{16}{24} = \frac{1}{4}$

Indépendants

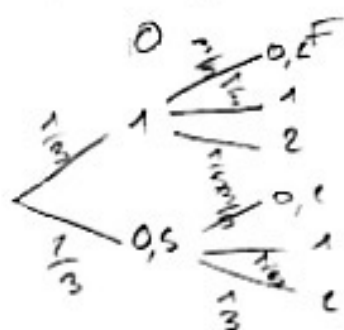d) $P(N \cap \overline{D}) = \frac{3}{24}$

$P(N) = \frac{9}{24}$

$P(\overline{D}) = \frac{8}{24}$

$\frac{9}{24} \times \frac{8}{24} = \frac{1}{8}$

Non, pas indépendants

44.

1. Car les poches d'Ornella et Fanny ne sont pas liés

2.

3.

	F 0, 2	1	2
0			
0,5	$\frac{2}{3} \times \frac{3}{5} = \frac{2}{5}$	$\frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$	$\frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$
1	$\frac{1}{3} \times \frac{3}{5} = \frac{1}{5}$	$\frac{1}{3} \times \frac{1}{5} = \frac{1}{15}$	$\frac{1}{3} \times \frac{1}{5} = \frac{1}{15}$

87. A

1.
a) $p(\bar{A} \cap B) = p(B) - p(A \cap B)$

$p(\bar{A} \cap B) = (1 - p(A)) \times p(B)$

$= p(B) - p(A \cap B)$

b) $p(\bar{A} \cap B) = p(\bar{A}) \times p(B)$

$= (1 - p(A)) \times p(B)$

c) Ils sont indépendants

2. $p(A \cap \bar{B}) = p(A) \times p(\bar{B})$

$= p(A) \times (1 - p(B))$

$= p(A) - p(A \cap B)$

$p(\bar{A} \cap \bar{B}) = p(\bar{A}) \times p(\bar{B})$

$= (1 - p(A)) \times (1 - p(B))$

$= 1 - p(B) - p(A) + p(A \cap B)$

$= p(\bar{B}) - p(A) + p(A \cap B)$