

Corrigé DM n° 7 groupe des loups

Exercice 1

1) On a :

$$p(A) = \frac{4}{32} = \frac{1}{8} ; p(T) = \frac{8}{32} = \frac{1}{4} ; p(L) = \frac{1}{32}$$

2) $L = A \cap T$

3) $O = A \cup T$

4) On a :

$$p(O) = p(A) + p(T) - p(A \cap T) = p(A) + p(T) - p(L) = \frac{11}{32}$$

5) $N = \bar{A} \cap \bar{T} = \overline{A \cup T} = \bar{O}$

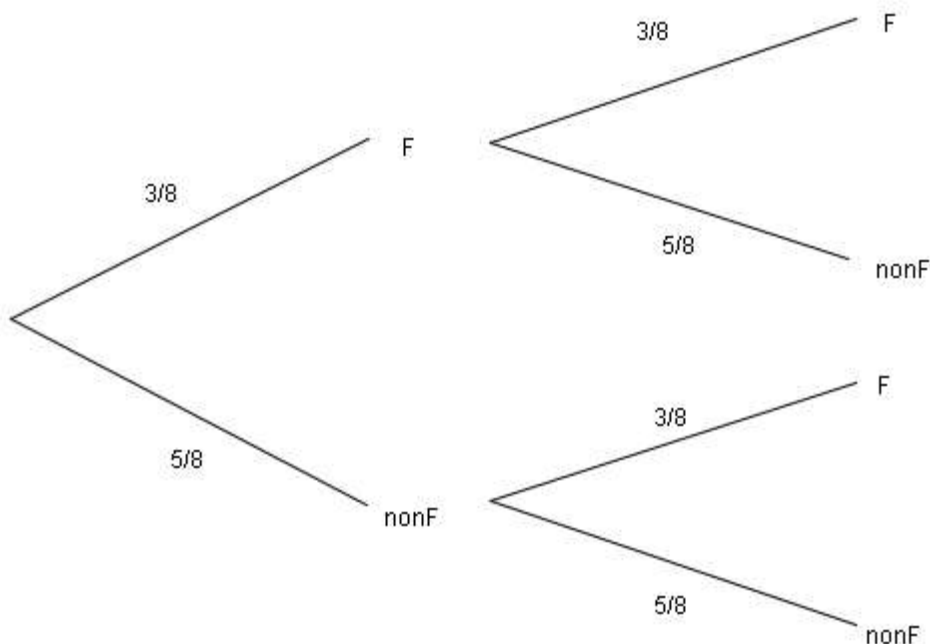
$$p(N) = 1 - p(O) = \frac{21}{32}$$

Exercice 2

1) On a :

$$p(F) = \frac{12}{32} = \frac{3}{8} ; p(\bar{F}) = 1 - \frac{3}{8} = \frac{5}{8}$$

2) On a :



$$p(D) = p(F \cap F) = \frac{3}{8} \times \frac{3}{8} = \frac{9}{64} ; p(A) = p(\bar{F} \cap \bar{F}) = \frac{5}{8} \times \frac{5}{8} = \frac{25}{64}$$

D et A ne sont pas contraires car $p(D) \neq 1 - p(A)$

$$p(U) = 1 - p(D) = \frac{39}{64}$$

Exercice 3

	Garçon	Fille	Total
Chez ses parents	250	300	550
Chez des amis	530	370	900
Au restaurant	70	80	150
Total	850	750	1600

$$p(a) = \frac{900}{1600} = \frac{9}{16} ; p(b) = \frac{300}{1600} = \frac{3}{16} ; p(c) = \frac{1000}{1600} = \frac{5}{8} ; p(d) = \frac{1530}{1600} = \frac{153}{160}$$