

$$p(A) \rightarrow \phi_A$$

$$p(B) \rightarrow \phi_B$$

$$p(C) \rightarrow \phi_C$$

$$p(D|A,B) \rightarrow \phi_{ABD}$$

$$p(E|C) \rightarrow \phi_{CE}$$

$$p(F|A,D) \rightarrow \phi_{ADF}$$

$$p(G|D,E) \rightarrow \phi_{DEG}$$

$$\begin{array}{c|c} A & 1-p(A) \\ \hline 1 & p(A) \end{array}$$

A	B	D	
0	0	0	0.75
0	0	1	0.25
0	1	0	0.7
0	1	1	0.3
1	0	0	0.6
1	0	1	0.4
1	1	0	0.2
1	1	1	0.8

$$p(C, F | G=0)$$

Passul 1: Să fac pruning pe toate variabilele din observate

$$\phi_G:$$

D	E	G	p
0	0	0	0.1
0	0	1	0.9
0	1	0	0.2
0	1	1	0.8
1	0	0	0.5

$$p_G: G=0$$

$$\phi_{G0}:$$

D	E	G	
0	0	0	0.1
0	1	0	0.2

$$\phi_G:$$

0	1	1	0.8
1	0	0	0.5
1	0	1	0.5
1	1	0	0.4
1	1	1	0.6

\Rightarrow

$$\phi_{G0}:$$

0	0	0	0.1
0	1	0	0.2
1	0	0	0.5
1	1	0	0.4

Pașul 2: Elimin variabilele în funcție de o ordine

P.S.: Las variabilele din evidență și din cerință neselectate

Ordinea eliminării este E, B, A, D:

a) Fac produs cu toți factorii care implică vor selectată

Pt E:

$$\phi_E:$$

C	E	
0	0	0.25
0	1	0.75
1	0	0.75
1	1	0.25

$$\phi_G:$$

D	E	G	
0	0	0	0.1
0	0	1	0.9
0	1	0	0.2
0	1	1	0.8
1	0	0	0.5
1	0	1	0.5
1	1	0	0.4
1	1	1	0.6

↓

$$\begin{array}{r} 220 \mid .4 \\ 221 \mid .6 \end{array}$$

A handwritten digit recognition grid. The first row contains the labels 'C', 'Δ', 'E', and 'G'. Below the labels is a 5x4 grid of handwritten digits. The digits are as follows:

0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

Annotations include:

- A horizontal line under the first row of labels.
- A vertical line to the right of the grid.
- Orange circles around the first '0' in the first row and the '0' in the second row, first column.
- An orange rectangle around the first three '0's in the first row.
- An orange rectangle around the '0', '1', and '0' in the second row.
- An orange circle around the '1' in the second row, third column.

$$0.25 \cdot 0.1 = 0.025$$

$$0.75 \cdot 0.2 = 0.15$$

C	D	E	G	
0	0	0	0	$0.25 \cdot 0.1 = 0.025$
0	0	1	0	$0.75 \cdot 0.2 = 0.15$
0	1	0	0	$0.25 \cdot 0.5 = 0.125$
0	1	1	0	$0.75 \cdot 0.4 = 0.3$
1	0	0	0	$0.75 \cdot 0.1 = 0.075$
1	0	1	0	$0.25 \cdot 0.2 = 0.05$
1	1	0	0	$0.75 \cdot 0.5 = 0.375$
1	1	1	0	$0.25 \cdot 0.4 = 0.1$

b) Să însumezi după voi pe care vreau să o elimina

C	D	G
0	0	0
0	1	0
1	0	0
1	1	0

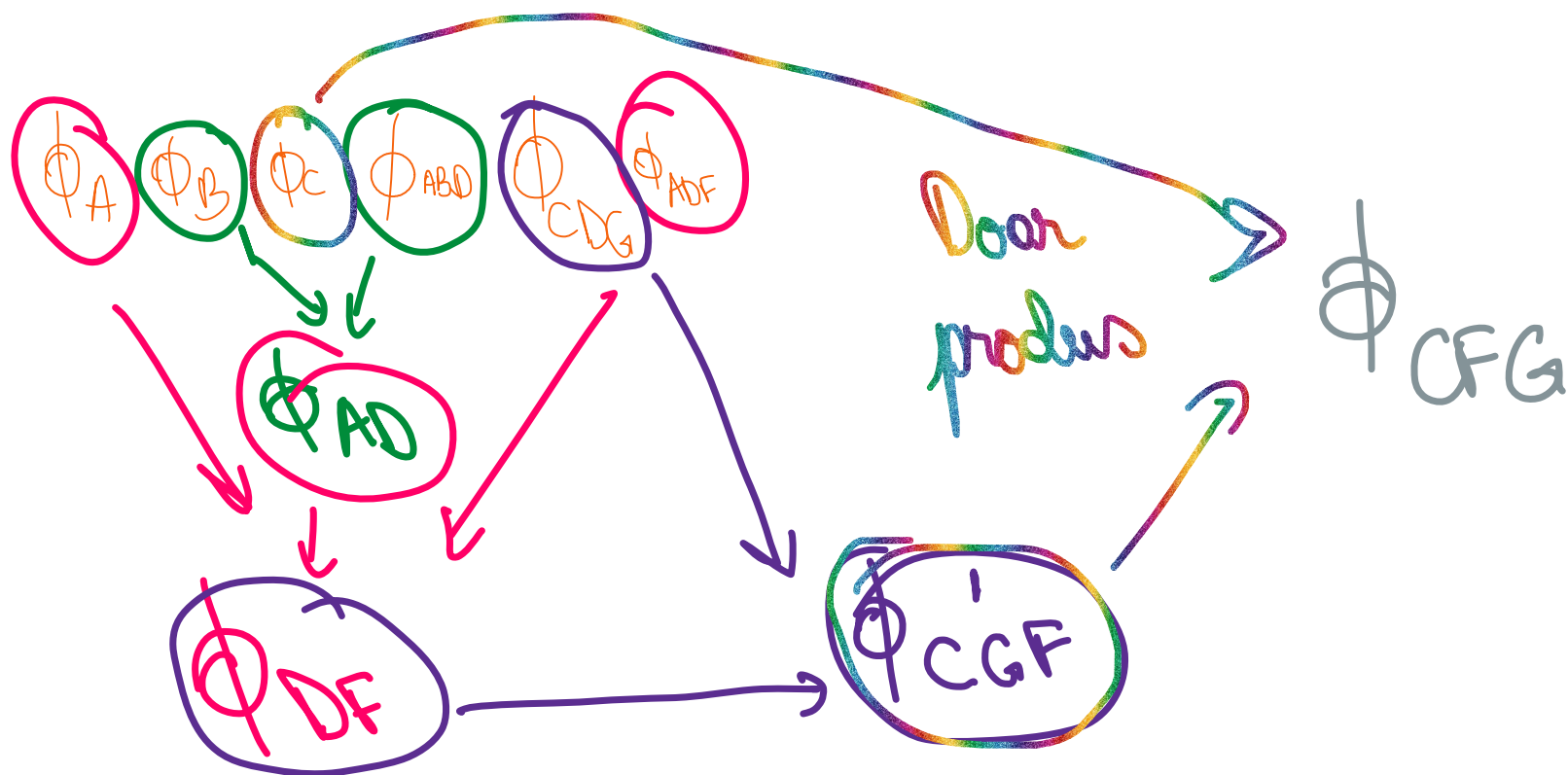
$$0.025 + 0.15 = 0.175$$

$$0.125 + 0.3 = 0.425$$

1	1	0

Initial: $\phi_A \phi_B \phi_C \phi_{ABD} \phi_{CE} \phi_{ADF} \phi_{DEG}$

Dupl
elim vor
E



C	F	G
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$$p(\underline{C=1}, \underline{F=0} | \underline{G=0})$$

C	F	G	
0	0	0	0.06477
0	1	0	0.042485
1	0	0	0.0921225
1	1	0	0.0611025

$$p(\underline{C} \approx 1, \underline{F} = 0 \mid \underline{G} = 0)$$

$$= \frac{0.0921225}{0.06477 + \dots + 0.0611025}$$

$$p(C=1 \mid F=0, G=0) \Rightarrow F=1$$

