

1)

$$(\neg e \wedge b \wedge c) \rightarrow (e \vee \neg b \vee c)$$

$$\neg(\neg e \wedge b \wedge c) \vee (e \vee \neg b \vee c)$$

$$(e \vee \neg b \vee \neg c) \vee (e \vee \neg b \vee c)$$

2)  $\{1, 2, 3\}$

$$\text{row}(A) = 2^3 = 8$$

$$\text{row}(\text{row}(A)) = 2^8 = 256$$

3)

$$120 \bmod 45 = 30$$

$$45 \bmod 30 = 15$$

$$30 \bmod 15 = 0$$

$$\text{HCD} \rightarrow 15$$

4)

$$12^{-1} \bmod 13$$

$$\varphi(13) = 12$$

$$(12^{-1} \bmod 13)^{11} \bmod 13$$

$$4^{11} \bmod 13$$

$$2^{22} \bmod 13$$

$$\varphi(13) = 12$$

$$2^{22 \bmod 12} \bmod 13$$

$$2^{10} \bmod 13$$

$$(2^4)^2 \cdot 2^2 \bmod 13 \rightarrow 36 \bmod 13 = 10$$

5)

per il pipeline principale almeno 6 assieme lo stesso resto se divisi per 3

6)

$$\frac{10}{36 \cdot 36} = \frac{10}{1296}$$

$$\begin{array}{r} 36 \\ 36 \\ \hline 216 \\ 108 \\ \hline 1296 \end{array}$$

1 1 3 1

1 1 1 3

1 3 1 1

3 1 1 1

1 1 2 2

1 2 1 2

2 1 1 2

2 1 2 1

2 2 1 1

1 2 2 1

7)  $|V_1| = 5$        $|V_2| = 6$

$5 \cdot 6 = 30$  eschi in totale

8)  $3x - 6 = 3 \cdot 8 - 6 = 18$