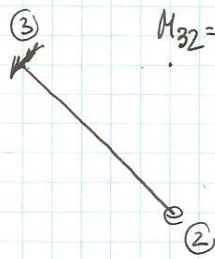


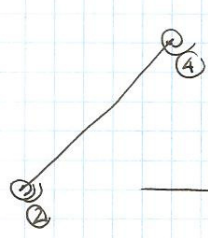
$$M_{21} = \frac{4EI\theta_2}{L} = 4EI\theta_2$$

$$M_{12} = \frac{2EI\theta_2}{L} = 2EI\theta_2$$



$$M_{32} = \frac{2EI\theta_2}{L} = 2EI\theta_2$$

$$M_{23} = \frac{4EI\theta_2}{L} = 4EI\theta_2$$

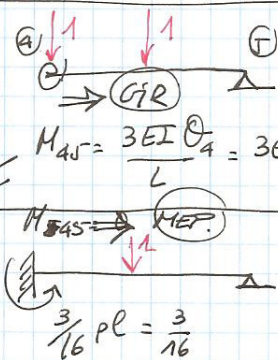


$$M_{42} = \frac{4EI\theta_4}{L} + \frac{2EI\theta_2}{L} = 4EI\theta_4 + 2EI\theta_2$$

$$M_{24} = \frac{4EI\theta_2}{L} + \frac{2EI\theta_4}{L} = 2EI\theta_2 + 2EI\theta_4$$

$$M_{45} = \frac{3}{16} + 3EI\theta_4$$

$$M_{54} = 0$$



$$M_{45} = \frac{3EI\theta_4}{L} = 3EI\theta_4$$

$$\frac{3}{16}pl = \frac{3}{16}$$

$$M_{21} = 4EI\theta_2 = 0,716$$

$$M_{12} = 2EI\theta_2 = 0,358$$

$$M_{32} = 2EI\theta_2 = 0,358$$

$$M_{23} = 4EI\theta_2 = 0,716$$

$$M_{42} = 4EI\theta_4 + 2EI\theta_2 = 0,046$$

$$M_{24} = 2EI\theta_2 + 2EI\theta_4 = 0,059$$

$$M_{45} = \frac{3}{16} + 3EI\theta_4 = -0,046$$

$$M_{54} = 0$$

$$\textcircled{1} \quad 4EI\theta_2 + 4EI\theta_2 + 2EI\theta_4 + 4EI\theta_2 = 12EI\theta_2 + 2EI\theta_4 = 2$$

$$\textcircled{2} \quad 4EI\theta_4 + 2EI\theta_2 + \frac{3}{16} + 3EI\theta_4 = 7EI\theta_4 + 2EI\theta_2 + \frac{3}{16} = 0$$

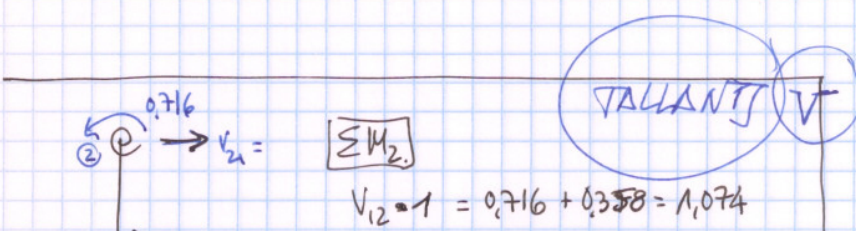
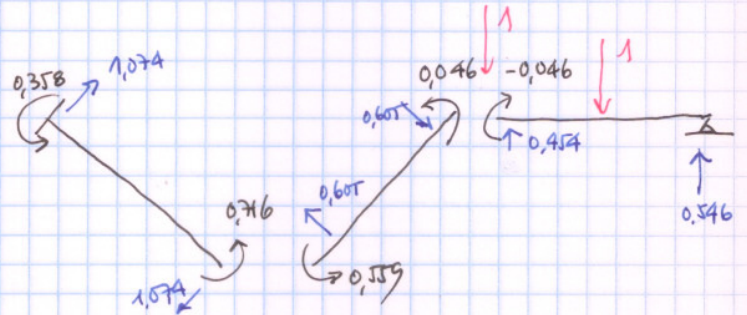
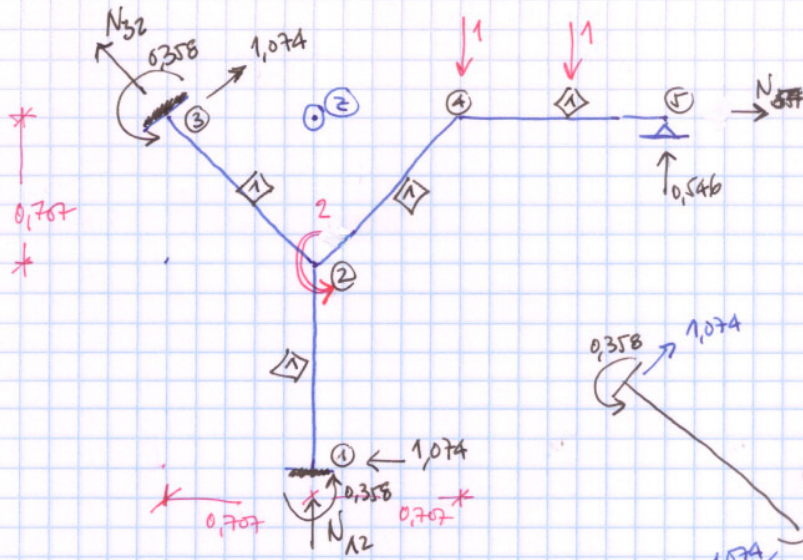
$$EI\theta_4 = 1 - 6EI\theta_2 \quad ; \quad 7 - 42EI\theta_2 + 2EI\theta_2 + \frac{3}{16} = 0$$

$$= \frac{7 + \frac{3}{16}}{40} = 0,17968$$

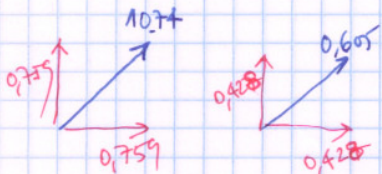
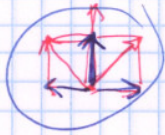
$$EI\theta_4 = 1 - 6(0,17968) = -0,078125$$

$$\textcircled{1} \quad M_{23} + M_{24} + M_{21} = 2 \leftarrow \text{Imp}$$

$$\textcircled{2} \quad M_{42} + M_{45} = 0$$



$\cos 45^\circ = 0.707$
 $\sin 45^\circ = 0.707$



$\sum M_4 = 0$
 $1 \cdot V_{45} = 0.5 - 0.046 = 0.454$
 $\sum F_V = 0$
 $V_{45} = 1 - V_{54} = 0.454$

AL ANAUIZAR BARREI; LET ACCOMI ALI NUSOS NO ES COMPTEN!!!

AXILS N → EQUILIBRI GENERAL ESTRUCTURA →

$N_{32} \rightarrow \sum M_2 = 0$

$[-0.5N_{32} - (1.074 \cdot 0.5) + 0.358] + 2 + [0.358 - (1.074 \cdot 1.707)] - 0.707 - 1.207 + (0.546 \cdot 1.707) = 0$

$0.5N_{32} = -0.636296 \rightarrow N_{32} = -1.272$

$N_{12} \rightarrow \sum M_3 = 0$

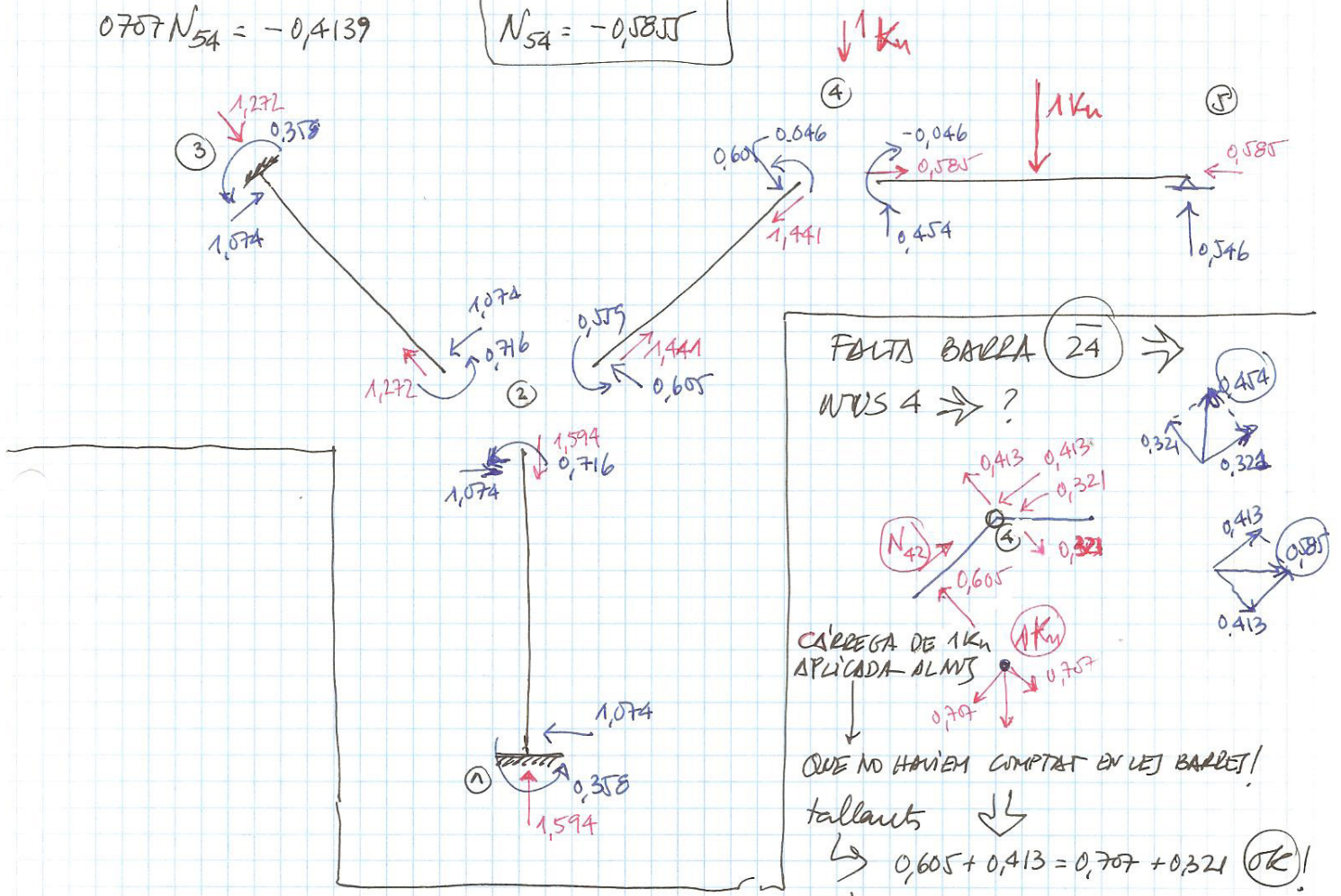
$[0.707 \cdot N_{12} + 0.358 - (1.074 \cdot 1.707)] + 2 + 0.358 = (1.414 \cdot 1) - (1 \cdot 1.914) + (0.546 \cdot 2.414) = 0$

$N_{54} \rightarrow \sum M_2 = 0$

$$\left[-0,707 N_{54} + (0,546 \cdot 1,707) \right] - (1 \cdot 1,207) - (1 \cdot 0,707) + 2 + \left[0,358 - (1,074 \cdot 1) \right] + \left[0,358 - (1,074 \cdot 1) \right] = 0$$

$0,707 N_{54} = -0,4139$

$N_{54} = -0,5855$

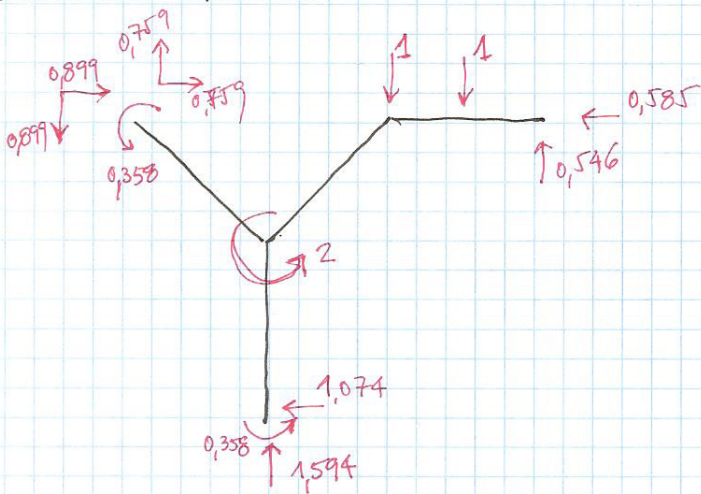


FALTA BARRA 24
 NUS 4 → ?

CÀRREGA DE 1kN APLICADA ALS

QUE NO HAVIEM COMPTAT EN LES BARRES!
 tallants
 ↳ $0,605 + 0,413 = 0,707 + 0,321$ (OK!)
 axis
 ↳ $0,413 + 0,321 + 0,707 = N_{42} = 1,441$ COMPT!

COMPROVACIÓ FINAL DELS RESULTATS
 EQUILIBRI EXTERIOR ESTRUCTURA



$\sum F_v = 0$

$0,899 + 1 + 1 = 0,546 - 0,759 - 1,594 = 0$

(OK!)

$\sum F_H = 0$

$0,899 + 0,759 = 1,074 + 0,585 \Rightarrow$ (OK!)

$\sum M = 0$

(OK!)