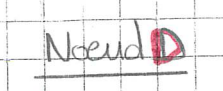
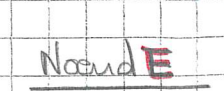
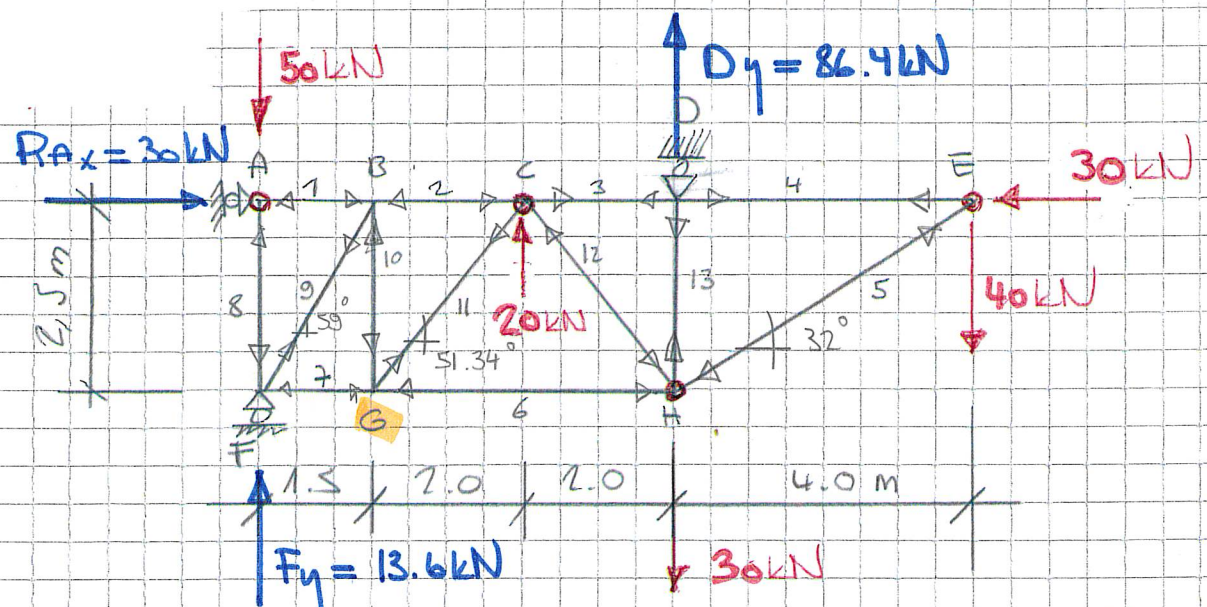
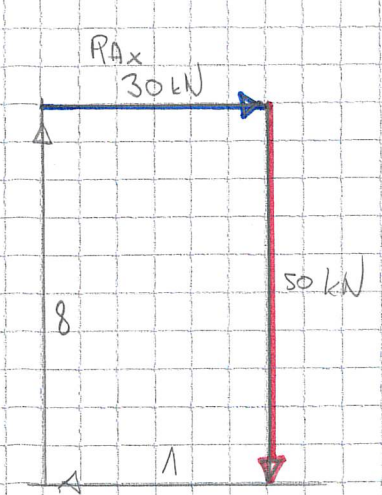
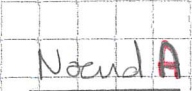
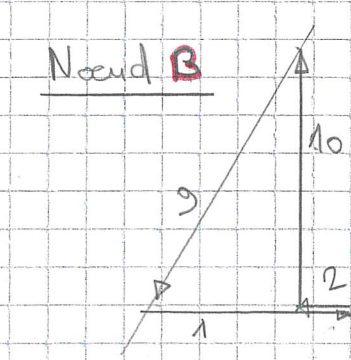
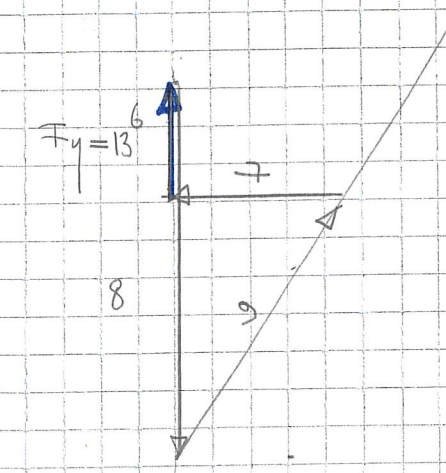
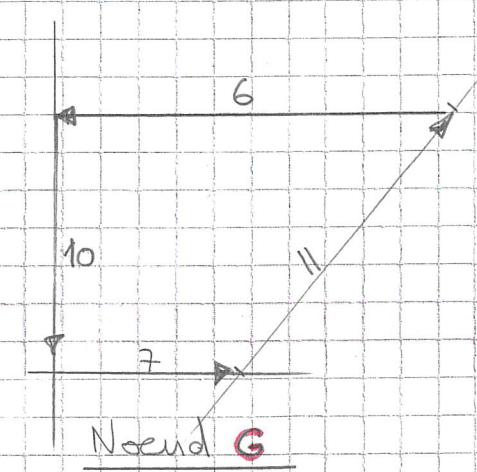
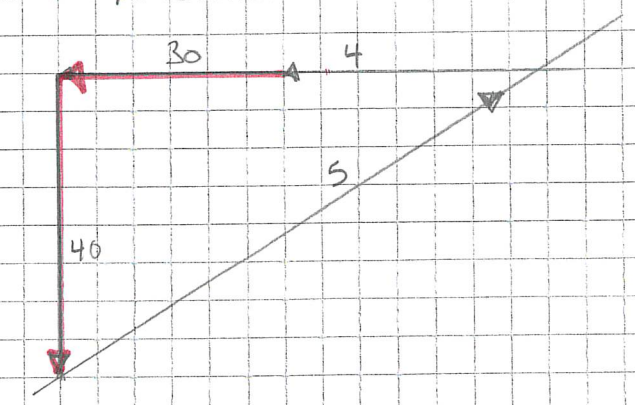
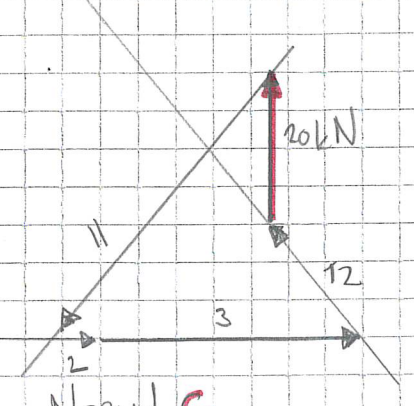
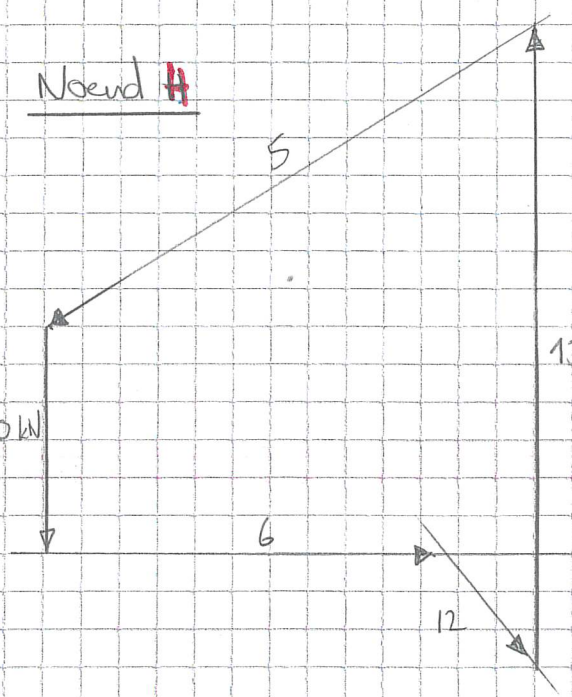


1. Déterminez les efforts dans le treillis ci-dessous :

30 pts efforts ds barres  
 15 pts réaction d'appuis  
 5 pts équilibre analytique du nœud G



N°	Efforts +/−
1	− 30 kN
2	− 7 kN
3	+ 34 kN
4	+ 34 kN
5	− 75 kN
6	− 52 kN
7	− 23 kN
8	− 50 kN
9	+ 42 kN
10	− 36 kN
11	+ 46 kN
12	− 19 kN
13	+ 86,4



Equilibre analytique nœud G

$$\sum F_x = 0 \quad \rightarrow \quad 36 - 52 + F_{11} \cos 51,34 = 0$$

$$\sum F_y = 0 \quad \rightarrow \quad -36 + F_{11} \sin 51,34 = 0$$

$$F_{11} = \frac{36}{\sin 51,34} = 46,1 \text{ kN}$$

$$F_7 = 52 - 46,1 \cdot \cos 51,34 = 23,2 \text{ kN}$$