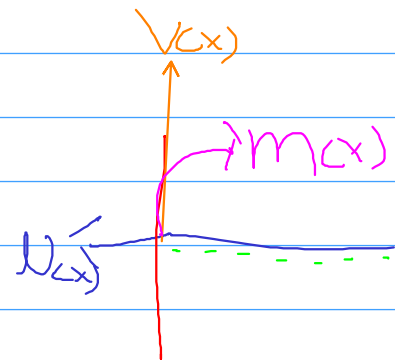
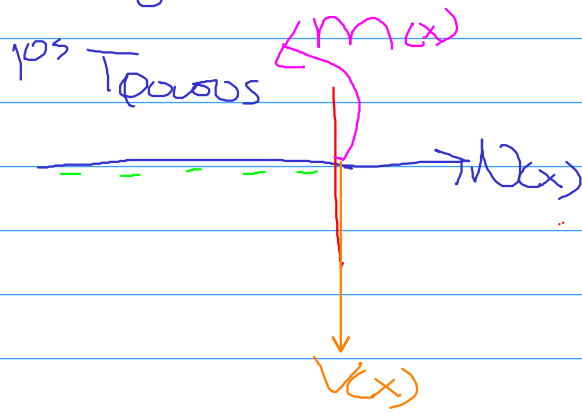
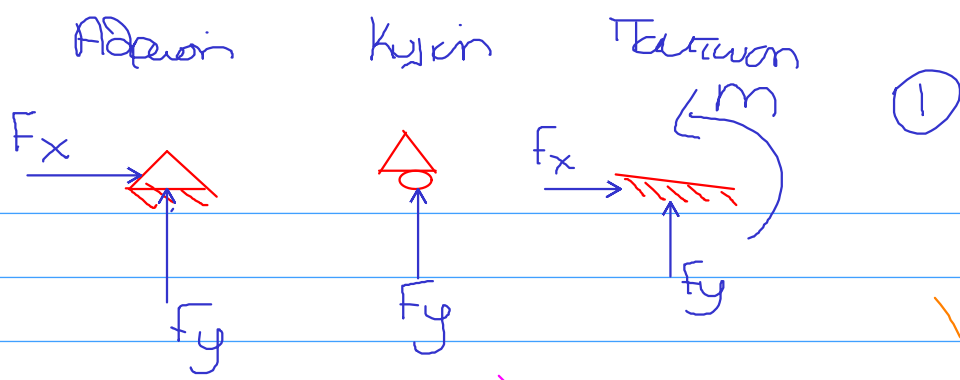
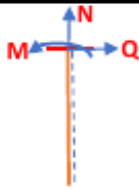
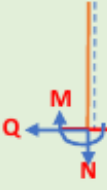
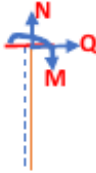
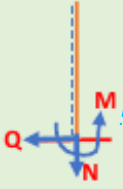
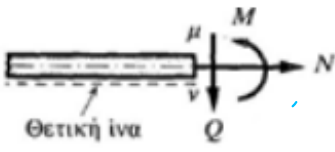
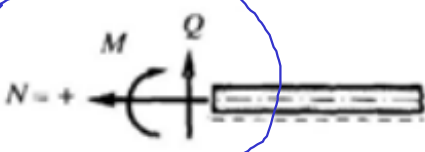




Φορές εσωτερικών δυνάμεων και της καμπτικής ροπής

Κόβω οριζόντια (στα αριστερά) και παίρνω το κάτω μέλος	
Κόβω οριζόντια (στα αριστερά) και παίρνω το πάνω μέλος	
Κόβω οριζόντια (στα δεξιά) και παίρνω το κάτω μέλος	
Κόβω οριζόντια (στα δεξιά) και παίρνω το πάνω μέλος	
Κόβω κάθετα και παίρνω το αριστερό μέλος	
Κόβω κάθετα και παίρνω το δεξί μέλος	

$$\frac{dF}{dx} = 0 \rightarrow \text{αμεσότητα}$$

$$\frac{dF}{dx^2} = 0 \rightarrow \text{αμεσότητα}$$



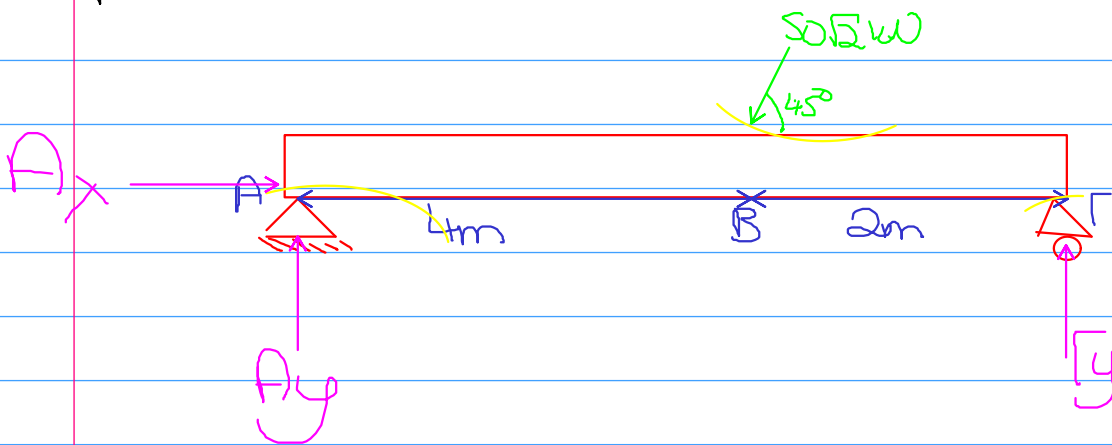
Πίνακας Διαγραμμάτων για N-Q-M

	Μέλος Τομής	N		Q		M	
Αριστερά							
Δεξιά							
Οριζόντια							
Κεκλιμένο Αριστερά							
Κεκλιμένο Δεξιά							
Κεκλιμένο Οριζόντια							

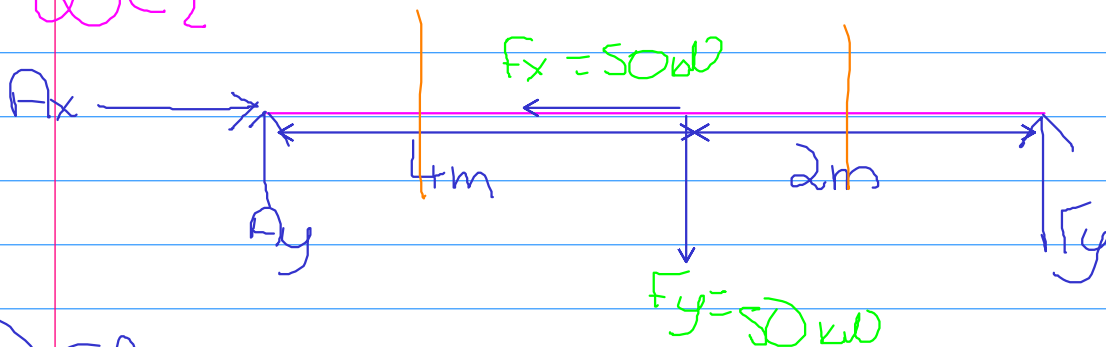
Exercice 1^{er}

$$F_x = F \cdot \cos \theta$$

$$F_y = F \cdot \sin \theta$$



DE



$$\sum F_x = 0$$

$$A_x - 50 = 0$$

$$A_x = 50 \text{ kN}$$

$$\sum F_y = 0$$

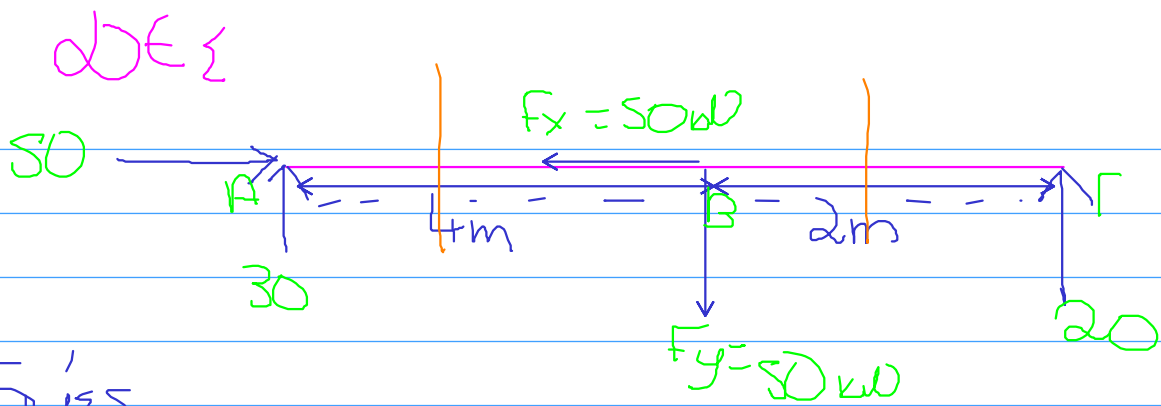
$$A_y + C_y - 50 = 0$$

$$A_y + C_y = 50$$

$$\sum M_A = 0$$

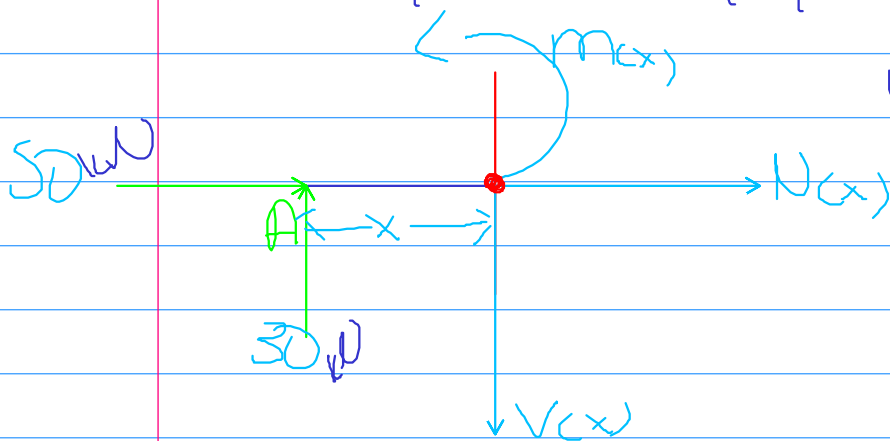
$$- 50 \cdot 4 + C_y \cdot 6 = 0$$

$$C_y = 20 \text{ kN}$$



Tayes

T₁ h Tayn l sto taynra AB $0 \leq x \leq 4$



$\sum F_x = 0$

$N(x) + 50 = 0$

$N(x) = -50$

$\sum F_y = 0$

$30 - V(x) = 0$

$V(x) = 30$

$\sum M_x = 0$

$M(x) - 30x = 0$

$M(x) = 30x$

At $x=0 \Rightarrow M(0) = 0$

At $x=4 \Rightarrow M(4) = 120$

$y = ax + b$

$N(x)$

A

B

(-)

-50

$V(x)$

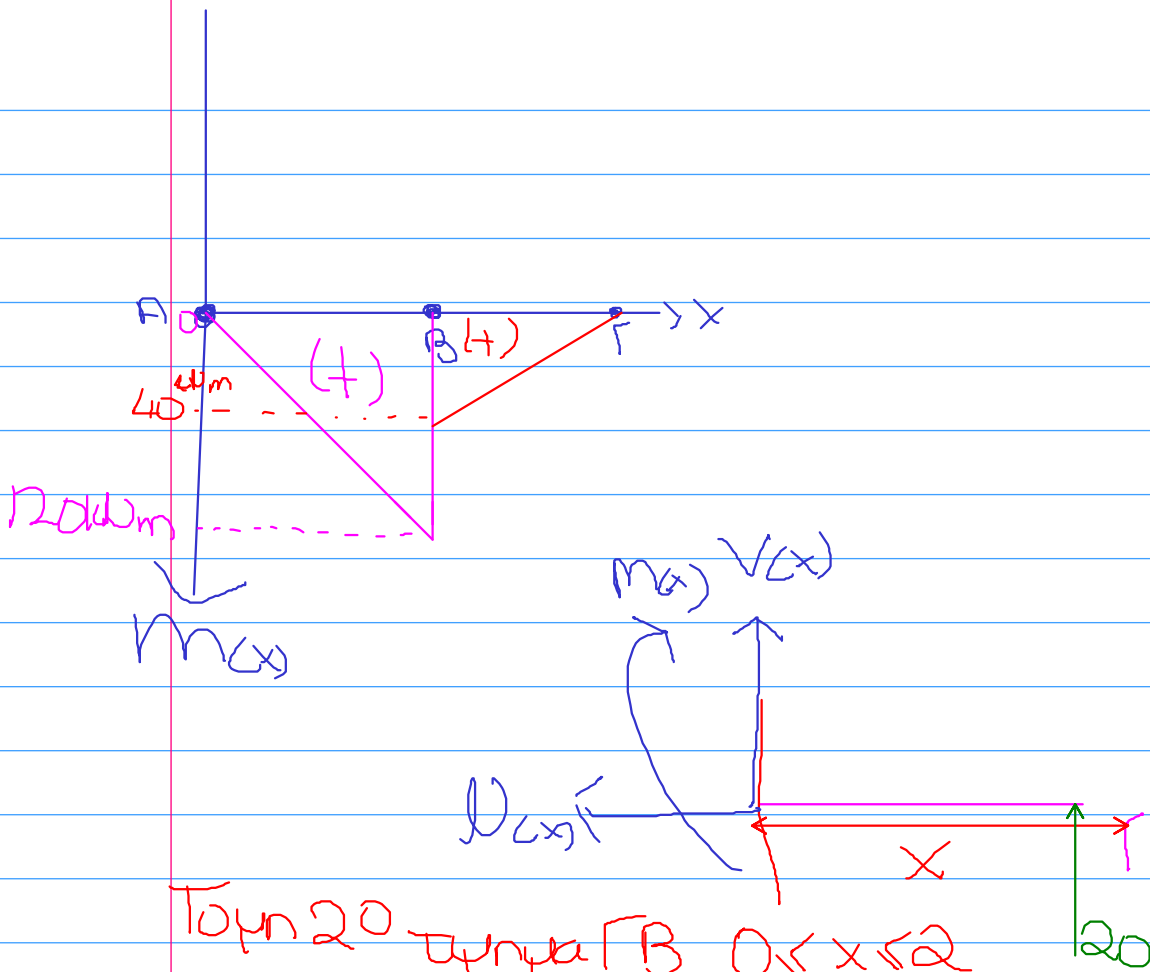
30

(+)

B

-20

(-)



Top 20 kN/m at B $0 \leq x \leq 2$

$$(\pm) \sum F_x = 0 \quad (\uparrow) \sum F_y = 0$$

$$N_A = 0 \text{ kN}$$

$$V(x) + 20$$

$$V(x) = -20 \text{ kN}$$

$$(\pm) \sum M_x = 0$$

$$-M(x) + 20x = 0$$

$$M(x) = 20x$$

$$M(0) = 0 \text{ kNm}$$

$$M(2) = 40 \text{ kNm}$$

Problema 2^a

