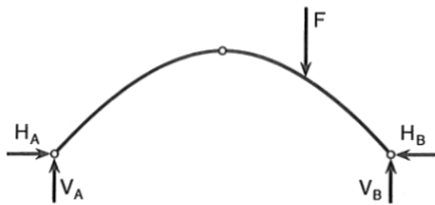
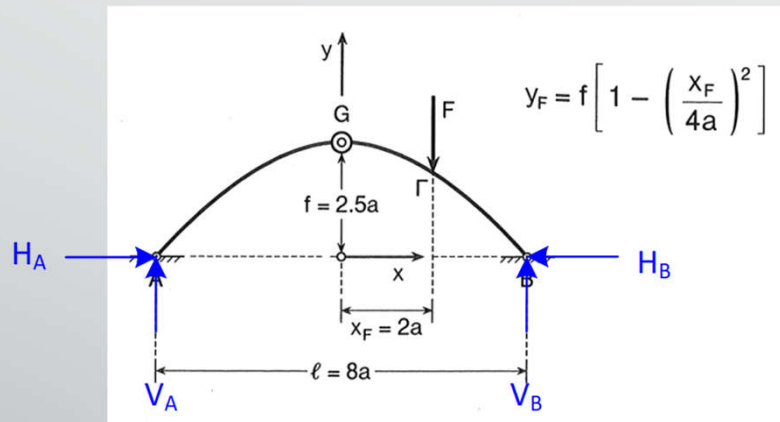




Ασκήσεις προς επίλυση

Υπολογισμός αντιδράσεων

Λύσεις



$$H_A = H_B = 0.4F$$

$$V_A = 0.25F$$

$$V_B = 0.75F$$

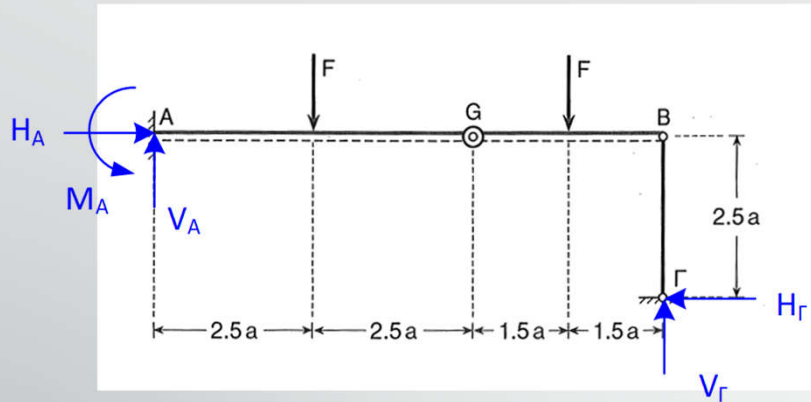
$$\Sigma M(A) = 0 \Rightarrow (+ \Sigma \Delta \Omega) + F \cdot 6a - V_B \cdot 8a = 0 \Rightarrow V_B = 3/4F.$$

$$\Sigma M(B) = 0 \Rightarrow (+ \Sigma \Delta \Omega) + V_A \cdot 8a - F \cdot 2a = 0 \Rightarrow V_A = F/4.$$

$$\Sigma M(G \delta \epsilon \xi) = 0 \Rightarrow (+ \Sigma \Delta \Omega) + F \cdot 2a - V_B \cdot 4a + H_B \cdot 2.5a = 0 \Rightarrow H_B = 2F/5.$$

$$\Sigma F_x = 0 (+ \rightarrow) + H_A - H_B = 0 \Rightarrow H_A = 2F/5.$$

Λύσεις



$$\Sigma M(B \text{ κάτω}) = 0 \Rightarrow (+\Sigma \Delta \Omega) - H_B \cdot 2.5a = 0 \Rightarrow H_B = 0.$$

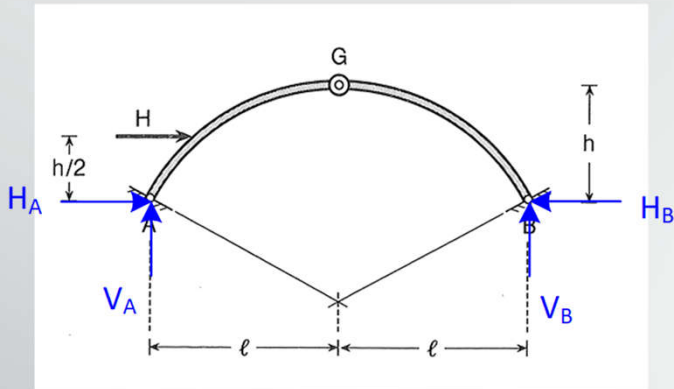
$$\Sigma F_x = 0 \Rightarrow (+ \rightarrow) + H_A + H_B = 0 \Rightarrow H_A = 0.$$

$$\Sigma M(G \text{ δεξ}) = 0 \Rightarrow (+\Sigma \Delta \Omega) + F \cdot 1.5a - V_B \cdot 3a - H_B \cdot 2.5a = 0 \Rightarrow V_B = F/2.$$

$$\Sigma F_y = 0 \Rightarrow (+ \uparrow) + V_A + V_B - 2F = 0 \Rightarrow V_A = 3F/2.$$

$$\Sigma M(A) = 0 \Rightarrow (+\Sigma \Delta \Omega) - M_A + F \cdot 2.5a + F \cdot 6.5a - V_B \cdot 8a + H_B \cdot 2.5a = 0 \Rightarrow M_A = 5Fa.$$

Λύσεις



$$\Sigma M(A) = 0 \Rightarrow (+\Sigma \Delta \Omega) - V \cdot B \cdot 2l + H \cdot h/2 = 0 \Rightarrow V \cdot B = hH/4l.$$

$$\Sigma M(B) = 0 \Rightarrow (+\Sigma \Delta \Omega) + V \cdot A \cdot 2l + H \cdot h/2 = 0 \Rightarrow V \cdot A = -hH/4l.$$

$$\Sigma M(G_{\delta \epsilon \xi}) = 0 \Rightarrow (+\Sigma \Delta \Omega) + H \cdot B \cdot h - V \cdot B \cdot l = 0 \Rightarrow H \cdot B = H/4.$$

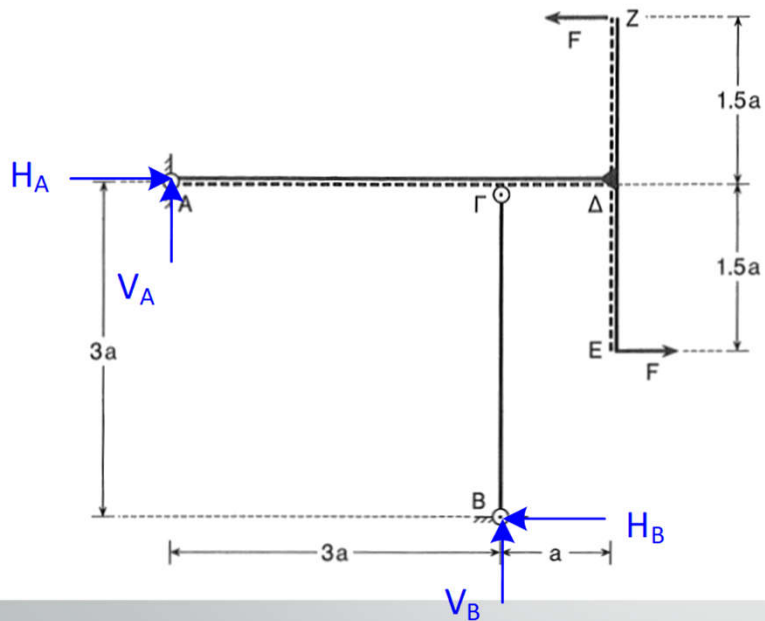
$$\Sigma F_x = 0 \Rightarrow (+ \text{--->}) + H \cdot A + H - H \cdot B = 0 \Rightarrow H \cdot A = -3H/4.$$

Επαλήθευση:

$$\Sigma F_y = 0.$$

$$\Sigma M(G) = 0 \Rightarrow (+\Sigma \Delta \Omega) - V \cdot B \cdot l + H \cdot B \cdot h - H \cdot h/2 + V \cdot A \cdot l - H \cdot A \cdot h = \dots = 0.$$

Λύσεις



$$\Sigma M(\Gamma_{\text{κάτω}}) = 0 \Rightarrow (+\Sigma \Delta \Omega) + H.B \cdot 3a = 0 \Rightarrow H.B = 0.$$

$$\Sigma F_x = 0 \Rightarrow +H.A - H.B - F + F = 0 \Rightarrow H.A = 0.$$

$$\Sigma M(\Gamma_{\text{πάνω}}) = 0 \Rightarrow (+\Sigma \Delta \Omega) + V.A \cdot 3a - F \cdot 1.5a - F \cdot 1.5a = 0 \Rightarrow V.A = F.$$

$$\Sigma F_y = 0 \Rightarrow (+\Sigma \Delta \Omega) + V.A + V.B = 0 \Rightarrow V.B = -F.$$