ΑΚΡΑΙΕΣ ΔΡΑΣΕΙΣ ΜΟΝΟΠΑΚΤΩΝ ΔΟΚΩΝ

$$
\phi_1
$$

$$
M_A = \frac{3EI}{L} \phi_1
$$

$$
Q_A = \frac{3EI}{L^2} \phi_1, \quad Q_B = \frac{3EI}{L^2} \phi_1
$$

$$
\delta_1
$$

$$
M_A = \frac{3EI}{L^2} (\delta_1 - \delta_2)
$$

$$
Q_A = \frac{3EI}{L^3} (\delta_1 - \delta_2), \quad Q_B = \frac{3EI}{L^3} (\delta_2 - \delta_1)
$$

$$
P
$$

$$
M_A = \frac{3PL}{16}
$$

$$
Q_A = \frac{11P}{16}, \quad Q_B = -\frac{5P}{16}
$$

$$
M_A = \frac{Pab}{2L} \left(1 + \frac{b}{a}\right)
$$

$$
Q_A = \frac{Pb}{2L} \left(3 - \frac{b^2}{L^2}\right), \quad Q_B = -\frac{Pa}{2L} \left(3 - \frac{a}{L}\right)
$$

$$
q
$$

$$
M_A = \frac{qL^2}{8}
$$

$$
Q_A = \frac{5qL}{8}, \quad Q_B = -\frac{3qL}{8}
$$

$$
M
$$

$$
M_A = \frac{M}{2} \left(1 - \frac{3b^2}{L^2}\right)
$$

$$
Q_A = \frac{3M}{2L} \left(1 - \frac{b^2}{L^2}\right), \quad Q_B = \frac{3M}{2L} \left(1 - \frac{b^2}{L^2}\right)
$$
### ΑΚΡΑΙΕΣ ΔΡΑΣΕΙΣ ΜΟΝΟΠΑΚΤΩΝ ΔΟΚΩΝ

<table>
<thead>
<tr>
<th>Ασκήσεις</th>
<th>Απόψεις</th>
</tr>
</thead>
<tbody>
<tr>
<td>$M_A = \frac{3\alpha EI}{2h} \delta T$</td>
<td>$Q_A = \frac{3\alpha EI}{2hL} \delta T$, $Q_B = \frac{3\alpha EI}{2hL} \delta T$</td>
</tr>
<tr>
<td>$N_A = -\alpha EA \Delta T_c$, $N_B = -\alpha EA \Delta T_c$</td>
<td>$\delta T = T_{\text{en}} - T_{\text{ex}}, \quad \Delta T_c = \frac{T_{\text{en}} + T_{\text{ex}}}{2} - T_0$</td>
</tr>
<tr>
<td>$N_A = \frac{b}{L} N$, $N_B = -\frac{a}{L} N$</td>
<td>$M_A = \frac{qa^2}{8L^2} (2L - a)^2$</td>
</tr>
<tr>
<td>$Q_A = \frac{qa}{8L} (8L^3 - 4a^2 L + a^3)$, $Q_B = -\frac{qa^3}{8L^3} (4L - a)$</td>
<td></td>
</tr>
</tbody>
</table>