Università di Pisa
Esame di SCIENZA DELLE COSTRUZIONI I
Corso di Laurea in Ingegneria Civile, Ambientale e Edile

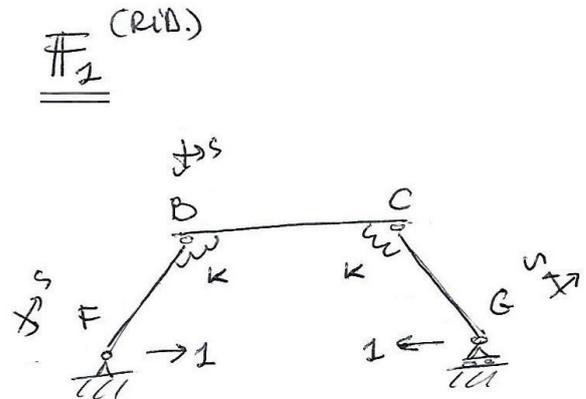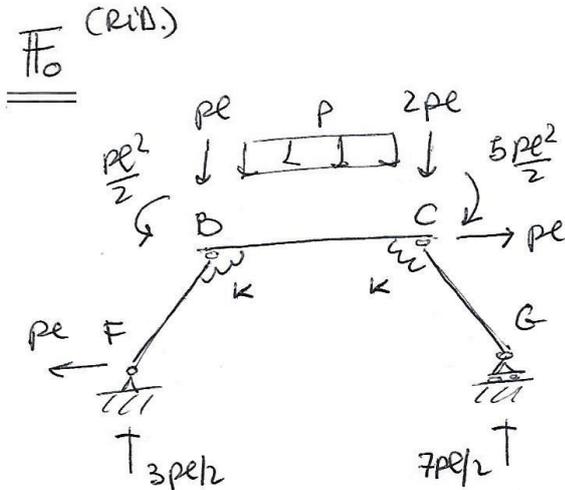*(Docenti: Prof. Ing. Stefano Bennati - Prof. Ing. Riccardo Barsotti)*

Sintesi della soluzione della prova scritta telematica del 14 settembre 2021

$$N_{FB} = -p\ell\sqrt{2}/4 \qquad N_{GC} = -p\ell \, 7\sqrt{2}/4$$
$$T_{FB} = p\ell \, 5\sqrt{2}/4 \qquad T_{GC} = -p\ell \, 7\sqrt{2}/4$$
$$M_{FB} = p\ell \, 5\sqrt{2}/4 \cdot S \qquad M_{GC} = -p\ell \, 7\sqrt{2}/4 \cdot S$$

$$N_{FB} = -\sqrt{2}/2 \qquad N_{GC} = -\sqrt{2}/2$$
$$T_{FB} = -\sqrt{2}/2 \qquad T_{GC} = \sqrt{2}/2$$
$$M_{FB} = -\sqrt{2}/2 \cdot S \qquad M_{GC} = \sqrt{2}/2 \cdot S$$

$$N_{BC} = p\ell$$
$$T_{BC} = -pS + p\ell/2$$
$$M_{BC} = -pS^2/2 + p\ell/2 \cdot S + 2p\ell^2$$

$$N_{BC} = -1$$
$$T_{BC} = 0$$
$$M_{BC} = -\ell$$

$$\eta_{10} + X_1 \eta_{11} = \eta_1 = 0$$

$$1 \cdot \eta_{11} - \frac{1}{k} \cdot 2\ell^2 = \int_{BC} \frac{M_1^2}{EJ} = \frac{2\ell^3}{EJ}$$

$$1 \cdot \eta_{10} + \frac{1}{k} \frac{5}{2} p\ell^3 + \frac{1}{k} \frac{7}{2} p\ell^3 = \int_{BC} \frac{M_1 M_0}{EJ} = -\frac{11}{3} \frac{p\ell^4}{EJ}$$