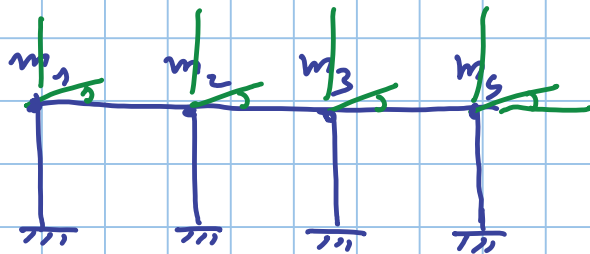


3 g.d.l. statici

masse 2 g.d.l.

trasversale vert
rimane orizz.

1 g.d.l. dinamico



traverso

- deformabile flessionale

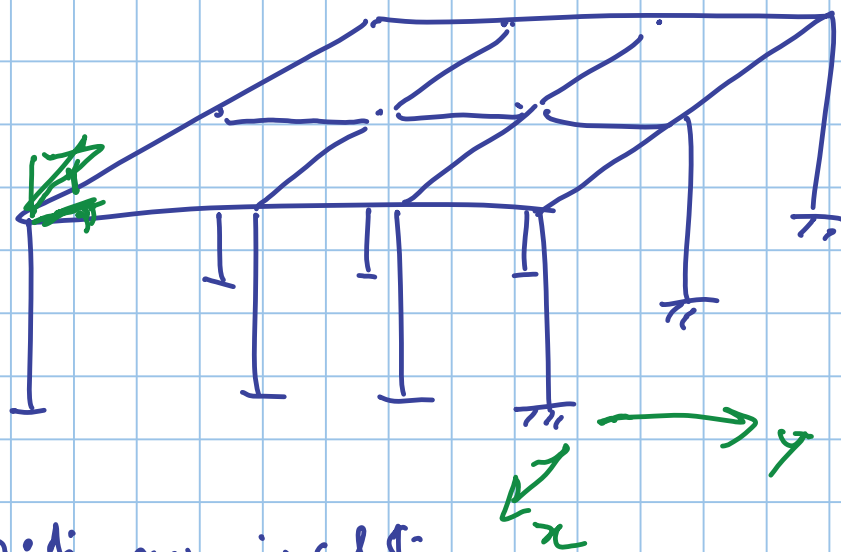
- indeformabile assiale

pilastri

- deformabili fless. + ass.

9 g.d.l. statici

trasversale vert. 1 g.d.l. dinamico



12 nodi non vincolati

1 spost. vert.

1 rot. x

1 rotaz. y

impalcato

u_x u_y φ_z

impalcato - deformab. fless.
- non def. estens.

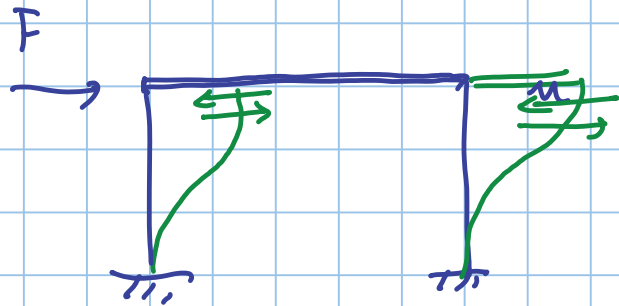
masse su impalcato

g.d.l. statici

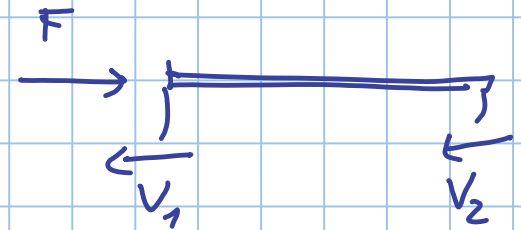
$$12 \times 3 + 3 = 39$$

se Trasm. vert.

3 g.d.l. dinamici



$$F = k u$$

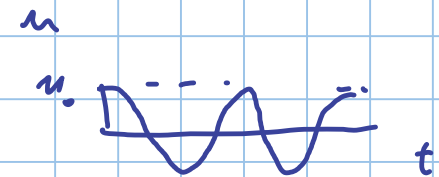


$$V_1 + V_2 = F$$

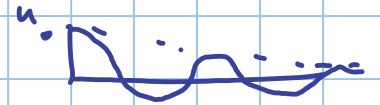
$$T = 2\pi \sqrt{\frac{m}{k}}$$

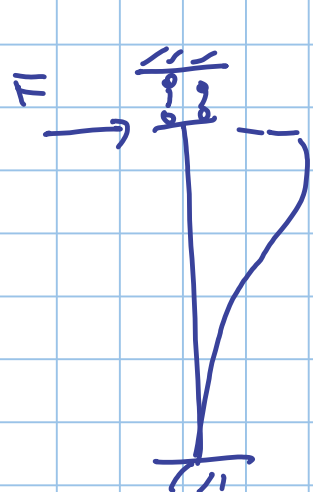
$$-k u = m \ddot{u}$$

$$m \ddot{u} + k u = 0$$




$$m \ddot{u} + c \dot{u} + k u = 0$$





$$u = \frac{F l^3}{12 E I}$$



$$u = \frac{F l^3}{3 E I}$$