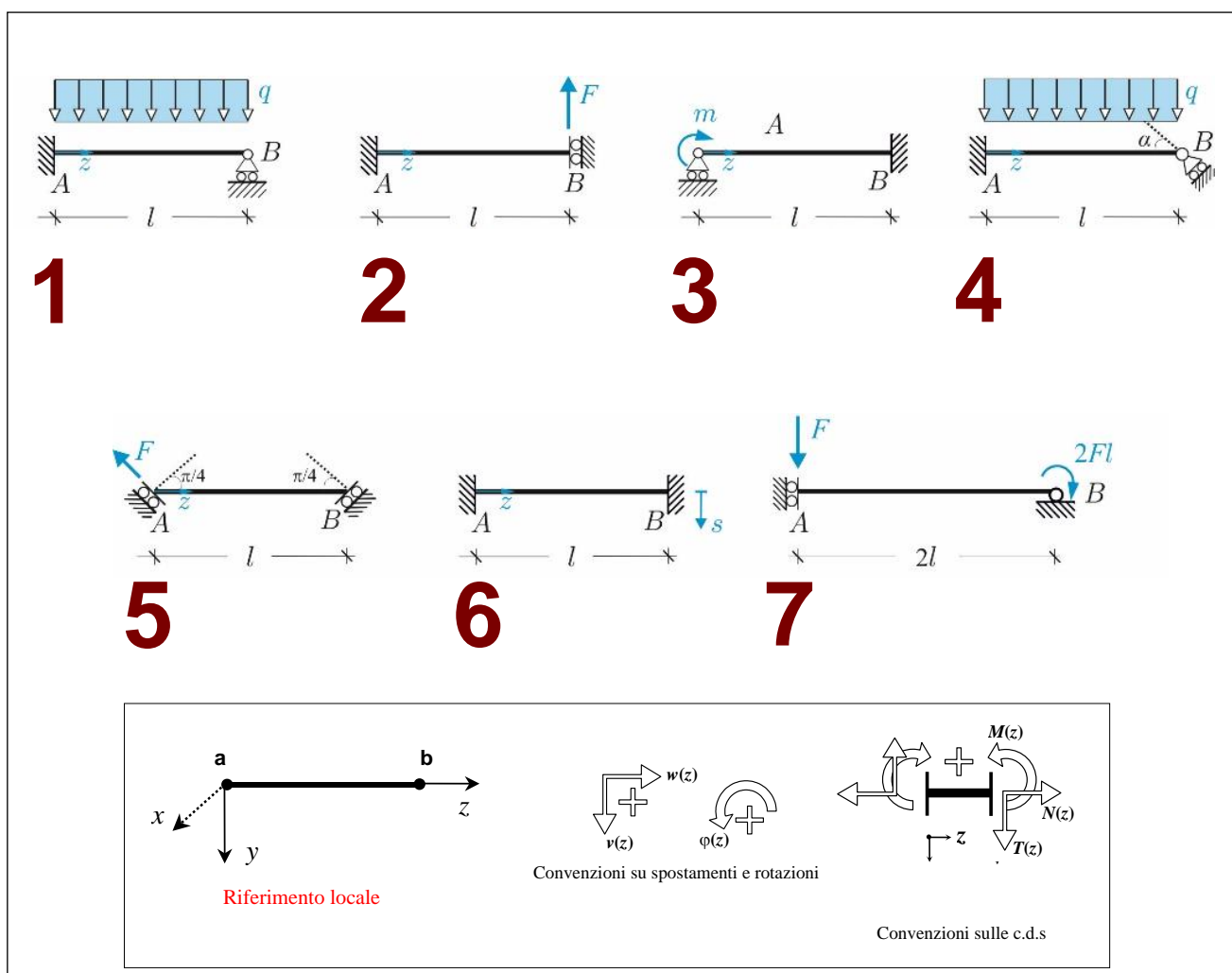


(E14a) –Linea elastica 1/2

Problemi 1-7. Per ciascuna delle *travi indeformabili a taglio* ($\gamma=0$) riportate in figura: **a)** scrivere le equazioni della linea elastica con le rispettive condizioni al contorno; **b)** disegnare qualitativamente la *deformata* della trave; **c)** determinare le leggi di variazione dei campi di spostamento e tensione e tracciare i relativi diagrammi. Si assumano uniformi le rigidzze con $EA=EI/l^2$. Si ricorda che: $N=EAw'$, $T=-EIv'''$, $M=-EIv''$.



The figure shows seven beam problems (1-7) and a section on conventions. Problems 1-4 are in the top row, 5-7 in the bottom row. Each problem shows a beam of length l with various supports and loads. Problem 1: fixed at A, roller at B, distributed load q . Problem 2: fixed at A, roller at B, point load F at B. Problem 3: fixed at A, roller at B, moment m at A. Problem 4: fixed at A, roller at B, distributed load q , angle α at B. Problem 5: fixed at A, roller at B, point load F at A, angles $\pi/4$ at both ends. Problem 6: fixed at A, roller at B, point load s at B. Problem 7: fixed at A, roller at B, point load F at A, moment $2Fl$ at B.

Convenzioni su spostamenti e rotazioni
 Diagram showing local reference system x, y, z and displacement $w(z)$, rotation $\varphi(z)$.

Convenzioni sulle c.d.s.
 Diagram showing internal forces: normal force $N(z)$, shear force $T(z)$, and bending moment $M(z)$.

COGNOME.....
 NOME.....
 MAT.....

PAGINA WEB DEL CORSO:
www.pcasini.it/disg/sdc

Soluzioni: cap. 9, § 9.4-9.6 (4° edizione)