

Name \_\_\_\_\_ Student number \_\_\_\_\_

## Home assignment 1

The bar shown is loaded by point forces of equal magnitudes  $P$  but opposite directions acting on points 1 and 2. Use the particle surrogate method (PSM) on the regular grid shown to write the equilibrium equations of points 1 and 2. After that, solve the equations for the axial displacements  $u_1$  and  $u_2$ . Cross-sectional area  $A$  and Young's modulus  $E$  of the material are constants.

