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

*L*

0

2

*x*

*L*

1

*P*

*P*

**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  and . Cross-sectional area *A* and Young’s modulus *E* of the material are constants.