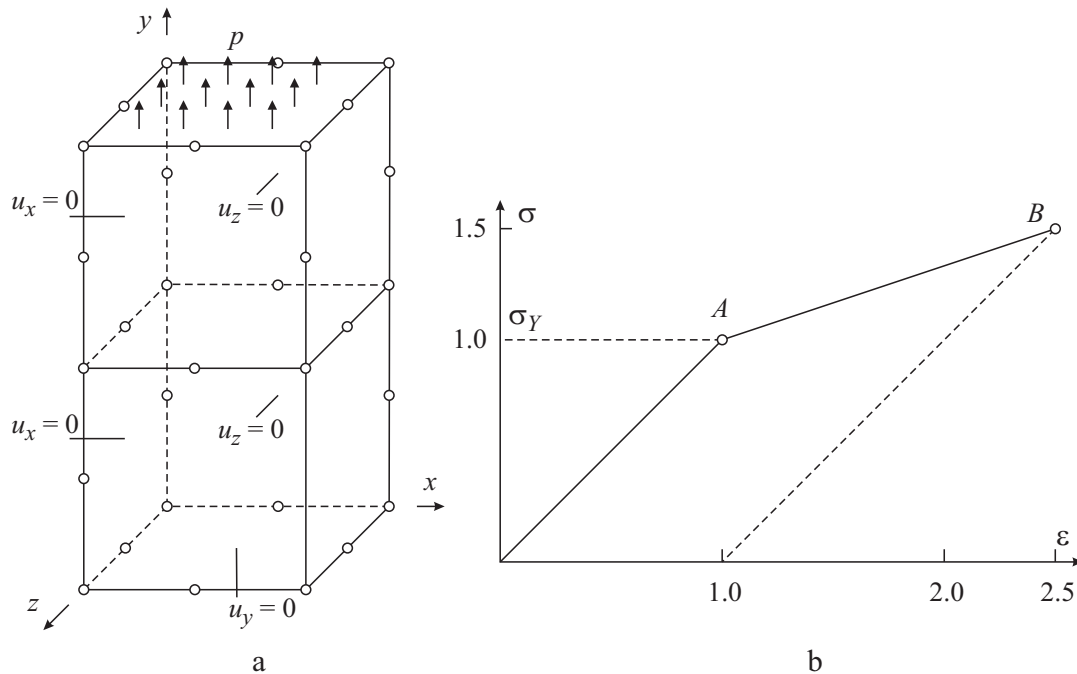# Example of Section 19.7
Solution of an Elastic-plastic Problem

a

b

Problem statement

Uniform tension of a rectangular prism with a square cross section shown in Fig. a.
Elastic-plastic material with the material deformation curve presented in Fig. b:

  Elasticity modulus $E = 1.0$;

  Poissons ratio $n = 0.3$;

  Yield stress $s_Y = 1.0$;

  Hardening coefficient $k = 0.5$;

  Hardening power $m = 1.0$.

Input data

File `f.fem` - input data for program `Jfem`;
file `f.mesh` - finite element mesh.

Problem solution

Execute command
```
java -cp ../classes fea.Jfem f.fem f.lst
```
or use file `x.bat`

Results

File `f.lst` - result file with brief information about solution.
File `f.lst.A` - result file for load step A.
File `f.lst.B` - result file for load step B.