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# Begins here
# Checking the installation

# Importing the essentials
from fenics import *
import matplotlib.pyplot as plt
import numpy as np

mesh = RectangleMesh(Point(-3.0, 2.0), Point(7.0, 6.0), 10, 10, "right/left")
print("dolfin works")

plot(mesh, title="matplotlib works")
plt.show()

V = FunctionSpace(mesh, "Lagrange", 1)
u = TrialFunction(V)
v = TestFunction(V)
f = Expression ("x[0]*x[1]", degree =2)

a = dot( grad(u), grad(v))*dx
L = f*v*dx

bc = DirichletBC (V, 0.0, DomainBoundary ())

u0= Function (V)
solve (a == L, u0, bc)

p=plot(u0, title="fenics works")
plt.show()

tst = np.zeros((2,2))
print("numpy works")

print("Check complete, it works")

# Ends here
```