

Problem 4.

Take step size = $\frac{2}{k+2}$, $k=0, 1, 2, 3, \dots, 19999$

Total iterations = 20000

Initial x_0 : all elements are 1/p

Gradient Calculation: using PyTorch

```
41 obj = objective(x_, a)
42 obj.backward()
43 grad = x_.grad
```

