# Networked Life Homework 5

Guo Ziqi - 1000905

Zhao Juan -1000918

Zhang Hao -1000899

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Exercise 1

1. ① = 0.5

②

Exercise 2

1. i+1

, the value doesn’t depend on j

Exercise 3

Yes, there is a tragedy of the commons. At equilibrium, when n = A/c, U=0.

At social optimum, when n = A/2c, U > 0 and it is maximized. As more people join the movie after social optimum, the total utility decrease.

1. Net benefit:

Exercise 4



Therefore, and

1. and ,
2. Case 1:

Case 2:

When U’=p,

And from, we can get ,

Case 1:

Case 2:

Comparison: