

# Sample Exercises for Microeconomics II\*

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## 1 Normal and Extensive Form Games

### 1.1 Normal Form Games

**Solution 1** ([Osborne \(2009\)](#) p. 5).

### 1.2 Iterated Deletion of Dominated Strategies

**Solution 2** ([Mailath et al. \(2019\)](#) p. 19).

### 1.3 Extensive Form Games

**Solution 3** (HW2 Solution p. 1).

## 2 A First Look at Equilibrium

### 2.1 Nash Equilibrium

**Solution 4** ([Osborne \(2009\)](#) p. 60).

**Solution 5** ([Mailath et al. \(2019\)](#) p. 62).

### 2.2 Subgame Perfection

**Solution 6** ([Osborne \(2009\)](#) p. 172).

**Solution 7** ([Mas-Colell et al. \(1995\)](#) p. 303).

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\*This set of exercises are collected by Vahid Rostamkhani for Microeconomics II course presented by Dr Farshad Hagh-Panah at TeIAS. Please feel free to inform me if there are any flaws in exercises or solutions.

## 2.3 Mixing

Solution 8 ([Mailath et al. \(2019\)](#) p. 68).

## 3 Games with Nature

### 3.1 An Introductory Example

Solution 9 ([Mailath et al. \(2019\)](#) p. 108).

### 3.2 Auctions and Related Games

Solution 10 ([Mailath et al. \(2019\)](#) p. 109).

### 3.3 Games of Incomplete Information

Solution 11 ([Mas-Colell et al. \(1995\)](#) p. 265).

Solution 12 ([Osborne \(2009\)](#)).

Solution 13 ([Mailath et al. \(2019\)](#) p.112).

## 4 Nash Equilibrium Refinements in Dynamic Games

### 4.1 Sequential Rationality and Perfect Bayesian Equilibrium

Solution 14 ([Mas-Colell et al. \(1995\)](#) p. 304).

Solution 15 ([Mas-Colell et al. \(1995\)](#) p. 304).

## 5 Signaling

Solution 16 ([Mailath et al. \(2019\)](#) p. 184).

Solution 17 ([Mas-Colell et al. \(1995\)](#) p. 475).

## 6 Moral Hazard

Solution 18 ([Mas-Colell et al. \(1995\)](#) p. 507).

**Solution 19** (A (in the course folder)).

**Solution 20** (A (in the course folder)).

## 7 Adverse Selection

**Solution 21** ([Akerlof \(1978\)](#)).

**Solution 22** ([Akerlof \(2002\)](#)).

**Solution 23** (B (in the course folder)).

## References

Akerlof, G. A. (1978). The market for “lemons”: Quality uncertainty and the market mechanism. In *Uncertainty in economics*, pages 235–251. Elsevier.

Akerlof, G. A. (2002). Behavioral macroeconomics and macroeconomic behavior. *American Economic Review*, 92(3):411–433.

Mailath, G. J. et al. (2019). Modeling strategic behavior: A graduate introduction to game theory and mechanism design. *World Scientific Books*.

Mas-Colell, A., Whinston, M. D., Green, J. R., et al. (1995). *Microeconomic theory*, volume 1. Oxford university press New York.

Osborne, M. (2009). Introduction to game theory: International edition oxford univ. press.