

Test
Advanced Microeconomics: Part II (Uwe Jirjahn)

Winter 2024/2025

Choose **two** questions out of the three questions Q1, Q2 and Q 3.

Q.1 Consider the following normal-form game:

| Player 2 | | A | B |
|----------|---|------|------|
| Player 1 | C | 8, 4 | 0, 0 |
| | D | 0, 0 | 4, 8 |

Q.1.a Identify the pure-strategy Nash equilibria.

Q.1.b Identify the mixed-strategy Nash equilibria and calculate each player's expected equilibrium payoff.

Q.2 Consider the following normal-form game:

| Player 2 | | K | L |
|----------|---|-------|-------|
| Player 1 | A | 4, -4 | -4, 4 |
| | B | -4, 4 | 4, -4 |

Q.2.a Find the pure-strategy Nash equilibria.

Q.2.b Find the mixed-strategy Nash equilibria and calculate each player's expected equilibrium payoff.

Q.3 Consider the following normal-form game:

| Player 2 Player 1 | a | b | c | d | e | f | g | h |
|----------------------|------|------|------|------|------|------|------|------|
| T | 1, 1 | 1, 1 | 1, 1 | 1, 1 | 3, 2 | 3, 2 | 3, 2 | 3, 2 |
| M | 4, 1 | 4, 1 | 2, 3 | 2, 3 | 2, 3 | 2, 3 | 4, 1 | 4, 1 |
| B | 5, 2 | 1, 1 | 5, 2 | 1, 1 | 5, 2 | 1, 1 | 5, 2 | 1, 1 |

Find the pure-strategy Nash equilibria by iterated elimination of dominated strategies.

Note: If you answer all questions, we will only consider Q.1 and Q.2.