**Практические занятия 5\_6 «Теория игр»**

**Задания.**

**1** **Платежная матрица приведена в таблице 1. Здесь XYZ –последние три цифры зачетки. Решить игру. Найти нижнюю и верхнюю цену игры. Имеется ли в игре седловая точка?**

Таблица 1

|  |  |  |  |
| --- | --- | --- | --- |
|  | F1 | F2 | F3 |
| E1 | -X | -Y | -Z |
| E2 | -12 | -20 | -24 |
| E3 | -5 | -21 | -45 |

**2 Решить игру 3\*3 в смешанных стратегиях аналитическим и графическим способом.**

Вариант 1

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 4 | 4 | 3 |
| А2 | 5 | 2 | 1 |
| А3 | 4 | 1 | 4 |

Вариант 2

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 5 | 2 | 1 |
| А3 | 4 | 2 | 4 |

Вариант 3

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 5 | 2 | 2 |
| А3 | 3 | 2 | 3 |

Вариант 4

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 6 | 4 | 3 |
| А2 | 5 | 2 | 1 |
| А3 | 4 | 2 | 4 |

Вариант 5

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 2 | 2 | 2 |
| А3 | 5 | 2 | 3 |

Вариант 6

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 5 | 2 | 1 |
| А3 | 2 | 5 | 4 |

Вариант 7

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 5 | 1 | 6 |
| А3 | 3 | 2 | 3 |

Вариант 8

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 4 | 3 | 3 |
| А2 | 1 | 2 | 1 |
| А3 | 4 | 2 | 4 |

Вариант 9

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 2 | 3 |
| А2 | 1 | 3 | 2 |
| А3 | 3 | 5 | 3 |

Вариант 10

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 5 | 3 |
| А2 | 5 | 1 | 6 |
| А3 | 4 | 5 | 4 |

Вариант 11

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 5 | 4 | 5 |
| А2 | 5 | 2 | 2 |
| А3 | 3 | 4 | 3 |

Вариант 12

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 6 | 4 | 3 |
| А2 | 5 | 3 | 1 |
| А3 | 2 | 5 | 4 |

Вариант 13

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 5 | 2 | 2 |
| А3 | 6 | 4 | 3 |

Вариант 14

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 2 | 2 | 1 |
| А3 | 4 | 2 | 4 |

Вариант 15

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 7 | 3 |
| А2 | 5 | 2 | 2 |
| А3 | 3 | 2 | 3 |

Вариант 16

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 6 | 8 | 3 |
| А2 | 5 | 2 | 1 |
| А3 | 4 | 2 | 4 |

Вариант 17

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 6 | 3 |
| А2 | 2 | 2 | 2 |
| А3 | 5 | 2 | 3 |

Вариант 18

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 3 |
| А2 | 5 | 5 | 1 |
| А3 | 2 | 5 | 4 |

Вариант 19

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 4 | 6 |
| А2 | 5 | 1 | 6 |
| А3 | 3 | 2 | 3 |

Вариант 20

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 6 | 3 | 3 |
| А2 | 1 | 2 | 1 |
| А3 | 4 | 2 | 4 |

Вариант 21

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 7 | 2 | 3 |
| А2 | 2 | 3 | 2 |
| А3 | 3 | 5 | 3 |

Вариант 22

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 3 | 5 | 7 |
| А2 | 5 | 7 | 6 |
| А3 | 4 | 5 | 3 |

Вариант 23

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 7 | 4 | 5 |
| А2 | 7 | 2 | 2 |
| А3 | 3 | 4 | 3 |

Вариант 24

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 6 | 4 | 3 |
| А2 | 1 | 3 | 1 |
| А3 | 6 | 7 | 4 |

Вариант 25

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 7 | 4 | 3 |
| А2 | 2 | 3 | 2 |
| А3 | 6 | 4 | 3 |

Вариант 26

|  |  |  |  |
| --- | --- | --- | --- |
|  | В1 | В2 | В3 |
| А1 | 1 | 5 | 3 |
| А2 | 5 | 2 | 2 |
| А3 | 6 | 4 | 3 |