Решить симплекс-методом задачу линейного программирования вида (1.1) с заданными исходными данными и начальным базисным планом.

**Задача 1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−5 2 3−4−6 0 1−5) ' | | | | | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 36 |  |  |
|  |  | 0 1 | | 4 1 0 −8 1 5 | | | | | |  |  |  |
|  |  |  |  |  | −11 |  |  |
| *A* = |  | 0 | −1 0 −1 0 0 | | | | | 0 | 0 |  | , b = |  |  | , |
|  |  |  | 10 |  |
|  |  | 0 | 2 | −1 | 0 −1 3 | | | −1 0 | |  |  |  | 20 |  |  |
|  |  | 1 | 1 | 1 | 1 | 0 | 3 | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *x нач* =(4 | 5 0 | 6 0 0 0 5) ', | *JБ* ={1 | 2 4 | 8}. |

**Задача 2**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 15 | |  |  |
|  | 0 1.0 | | 1.0 | 1.0 | 0 − 8.0 | | 1.0 | 5.0 |  |  |  |  |
|  |  |  |  |  | −45 |  |  |
|  | 0 | −1.0 | 0 | − 7.5 | 0 | 0 | 0 | 2.0 |  | , | b = |  |  | , |
| *A* = |  |  | 1.8 |  |
|  | 0 | 2.0 | 1.0 | 0 | − 1.0 | 3.0 | −1.4 | 0 |  |  |  |  | 19 |  |  |
|  |  | 1.0 | 1.0 | 1.0 | 0 | 3.0 | 1.0 | 1.0 |  |  |  |  |  |  |
| 1.0 | |  |  |  |  |  |  |  |
| *x нач* =(4 | | 0 6 | 6 | 0 0 3 | 0) ', | *JБ* ={1 | | 3 4 | 7}. |  |  |  |  |  |  |

**Задача 3**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | | | |  |  | |  |  |  |  | |  | |  |  |
| 0 | − 1.0 | | 1.0 | | − 7.5 | | 0 | | 0 | 0 | | 2.0 |  |  |  | | 6 | |  |  |
|  | 2.0 | | 1.0 | | 0 | | − 1.0 | | 3.0 | −1.5 | | 0 |  | , |  | |  | |  | , |
| *A* =0 |  | b = 1.5 | | | |  |
|  | − 1.0 | | 1.0 | | −1.0 | | 0 | | 3.0 | 1.0 | | 1.0 |  |  |  | | 10 | |  |  |
| 1.0 |  |  |  | |  |  |
| *x нач* =(4.0 | | 0 | | 6.0 | | 0 4.5 | | 0 | | 0 | 0) ', *JБ* | | | | | = {1 3 | | 5}. | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 4** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6−9−5 2−6 | | | | 0 1 3) ', | | |  |  |  |  |  |  |  |  |
| 2.0 | − 1.0 | 1.0 | − 7.5 | | 0 | 0 | 0 | 2.0 |  |  | 14 | |  |  |
|  | 2.0 | − 1.0 |  | 0 | 1.0 | 5.0 | −1.0 | −4.0 |  | , |  | 14 |  | , |
| *A* =4.0 |  |  | b = |  |
|  | −1.0 | 1.0 | −1.0 | | 0 | 3.0 | 1.0 | 1.0 |  |  |  | 10 |  |  |
| 1.0 |  |  |  |  |  |
| *x нач* =(4 | 0 6 | 0 4 | 0 | 0 | 0) ', | *JБ* ={1 3 | | 5}. |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 5** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6 9−5 2−6 | | | | 0 1 3) ', | |  |  |  |  |  |  |  |  |  |  |
| − 2.0 −1.0 | | | 3.0 | − 7.5 | 0 | 0 | 0 | 2.0 | |  |  |  | − 23.5 |  |  |
|  | 4.0 | 2.0 | − 6.0 | 0 | 1.0 | 5.0 −1.0 | |  | − 4.0 |  | , |  | −24.0 |  | , |
| *A* = |  |  | b = |  |
|  | 1.0 | − 1.0 | 0 | −1.0 | 0 | 3.0 1.0 | | | 1.0 |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |
| *x нач* =(0 | | 0 0 | 5 4 | 0 0 | 7) ', | *JБ* | = {4 | 5 | 8}. |  |  |  |  |  |  |

**Задача 6**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(6−9 5−2 6 0−1 3) ', | | | | | | | | |  |  |  |  |  |
| −2 −1 | | | 1 −7 0 | | | 0 | 0 2 |  |  |  | − 2 | |  |
|  | 4 2 | | −1 0 1 5 −1 −5 | | | | | |  |  | 14 |  | , |
| *A* = |  | , b = |  |
|  |  | 11 0 1 0 | | | | 3 | 1 1 |  |  |  | 4 |  |  |
| 1 |  |  |  |  |  |  |
| *x нач* =(4 | | 0 | 6 | 0 | 4 0 | | 0 0) | ', |  | *JБ* ={1 2 | 3}. |  |  |

**Задача 7**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−5 2 3−4−6 0 1−5) ' | | | | | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 36 |  |  |
|  |  | 0 1 | | 4 1 0 −8 1 5 | | | | | |  |  |  |
|  |  |  |  |  | −11 |  |  |
| *A* = |  | 0 | −1 0 −1 0 0 | | | | | 0 | 0 |  | , b = |  |  | , |
|  |  |  | 10 |  |
|  |  | 0 | 2 | −1 | 0 −1 3 | | | −1 0 | |  |  |  | 20 |  |  |
|  |  | 1 | 1 | 1 | 1 | 0 | 3 | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *x нач* =(4 | 5 0 | 6 0 0 0 5) ', | *JБ* ={1 | 2 4 | 8}. |

**Задача 8**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 15 | |  |  |
|  | 0 1.0 | | 1.0 | 1.0 | 0 − 8.0 | | 1.0 | 5.0 |  |  |  |  |
|  |  |  |  |  | −45 |  |  |
|  | 0 | −1.0 | 0 | − 7.5 | 0 | 0 | 0 | 2.0 |  | , | b = |  |  | , |
| *A* = |  |  | 1.8 |  |
|  | 0 | 2.0 | 1.0 | 0 | − 1.0 | 3.0 | −1.4 | 0 |  |  |  |  | 19 |  |  |
|  |  | 1.0 | 1.0 | 1.0 | 0 | 3.0 | 1.0 | 1.0 |  |  |  |  |  |  |
| 1.0 | |  |  |  |  |  |  |  |
| *x нач* =(4 | | 0 6 | 6 | 0 0 3 | 0) ', | *JБ* ={1 | | 3 4 | 7}. |  |  |  |  |  |  |

**Задача 9**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | | | |  |  | |  |  |  |  | |  | |  |  |
| 0 | − 1.0 | | 1.0 | | − 7.5 | | 0 | | 0 | 0 | | 2.0 |  |  |  | | 6 | |  |  |
|  | 2.0 | | 1.0 | | 0 | | − 1.0 | | 3.0 | −1.5 | | 0 |  | , |  | |  | |  | , |
| *A* =0 |  | b = 1.5 | | | |  |
|  | − 1.0 | | 1.0 | | −1.0 | | 0 | | 3.0 | 1.0 | | 1.0 |  |  |  | | 10 | |  |  |
| 1.0 |  |  |  | |  |  |
| *x нач* =(4.0 | | 0 | | 6.0 | | 0 4.5 | | 0 | | 0 | 0) ', *JБ* | | | | | = {1 3 | | 5}. | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 10** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6−9−5 2−6 | | | | 0 1 3) ', | | |  |  |  |  |  |  |  |  |
| 2.0 | − 1.0 | 1.0 | − 7.5 | | 0 | 0 | 0 | 2.0 |  |  | 14 | |  |  |
|  | 2.0 | − 1.0 |  | 0 | 1.0 | 5.0 | −1.0 | −4.0 |  | , |  | 14 |  | , |
| *A* =4.0 |  |  | b = |  |
|  | −1.0 | 1.0 | −1.0 | | 0 | 3.0 | 1.0 | 1.0 |  |  |  | 10 |  |  |
| 1.0 |  |  |  |  |  |
| *x нач* =(4 | 0 6 | 0 4 | 0 | 0 | 0) ', | *JБ* ={1 3 | | 5}. |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 11** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6 9−5 2−6 | | | | 0 1 3) ', | |  |  |  |  |  |  |  |  |  |  |
| − 2.0 −1.0 | | | 3.0 | − 7.5 | 0 | 0 | 0 | 2.0 | |  |  |  | − 23.5 |  |  |
|  | 4.0 | 2.0 | − 6.0 | 0 | 1.0 | 5.0 −1.0 | |  | − 4.0 |  | , |  | −24.0 |  | , |
| *A* = |  |  | b = |  |
|  | 1.0 | − 1.0 | 0 | −1.0 | 0 | 3.0 1.0 | | | 1.0 |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |
| *x нач* =(0 | | 0 0 | 5 4 | 0 0 | 7) ', | *JБ* | = {4 | 5 | 8}. |  |  |  |  |  |  |

**Задача 12**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(6−9 5−2 6 0−1 3) ', | | | | | | | | |  |  |  |  |  |
| −2 −1 | | | 1 −7 0 | | | 0 | 0 2 |  |  |  | − 2 | |  |
|  | 4 2 | | −1 0 1 5 −1 −5 | | | | | |  |  | 14 |  | , |
| *A* = |  | , b = |  |
|  |  | 11 0 1 0 | | | | 3 | 1 1 |  |  |  | 4 |  |  |
| 1 |  |  |  |  |  |  |
| *x нач* =(4 | | 0 | 6 | 0 | 4 0 | | 0 0) | ', |  | *JБ* ={1 2 | 3}. |  |  |

**Задача 13**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−5 2 3−4−6 0 1−5) ' | | | | | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 36 |  |  |
|  |  | 0 1 | | 4 1 0 −8 1 5 | | | | | |  |  |  |
|  |  |  |  |  | −11 |  |  |
| *A* = |  | 0 | −1 0 −1 0 0 | | | | | 0 | 0 |  | , b = |  |  | , |
|  |  |  | 10 |  |
|  |  | 0 | 2 | −1 | 0 −1 3 | | | −1 0 | |  |  |  | 20 |  |  |
|  |  | 1 | 1 | 1 | 1 | 0 | 3 | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *x нач* =(4 | 5 0 | 6 0 0 0 5) ', | *JБ* ={1 | 2 4 | 8}. |

**Задача 14**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 15 | |  |  |
|  | 0 1.0 | | 1.0 | 1.0 | 0 − 8.0 | | 1.0 | 5.0 |  |  |  |  |
|  |  |  |  |  | −45 |  |  |
|  | 0 | −1.0 | 0 | − 7.5 | 0 | 0 | 0 | 2.0 |  | , | b = |  |  | , |
| *A* = |  |  | 1.8 |  |
|  | 0 | 2.0 | 1.0 | 0 | − 1.0 | 3.0 | −1.4 | 0 |  |  |  |  | 19 |  |  |
|  |  | 1.0 | 1.0 | 1.0 | 0 | 3.0 | 1.0 | 1.0 |  |  |  |  |  |  |
| 1.0 | |  |  |  |  |  |  |  |
| *x нач* =(4 | | 0 6 | 6 | 0 0 3 | 0) ', | *JБ* ={1 | | 3 4 | 7}. |  |  |  |  |  |  |

**Задача 15**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | | | |  |  | |  |  |  |  | |  | |  |  |
| 0 | − 1.0 | | 1.0 | | − 7.5 | | 0 | | 0 | 0 | | 2.0 |  |  |  | | 6 | |  |  |
|  | 2.0 | | 1.0 | | 0 | | − 1.0 | | 3.0 | −1.5 | | 0 |  | , |  | |  | |  | , |
| *A* =0 |  | b = 1.5 | | | |  |
|  | − 1.0 | | 1.0 | | −1.0 | | 0 | | 3.0 | 1.0 | | 1.0 |  |  |  | | 10 | |  |  |
| 1.0 |  |  |  | |  |  |
| *x нач* =(4.0 | | 0 | | 6.0 | | 0 4.5 | | 0 | | 0 | 0) ', *JБ* | | | | | = {1 3 | | 5}. | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 16** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6−9−5 2−6 | | | | 0 1 3) ', | | |  |  |  |  |  |  |  |  |
| 2.0 | − 1.0 | 1.0 | − 7.5 | | 0 | 0 | 0 | 2.0 |  |  | 14 | |  |  |
|  | 2.0 | − 1.0 |  | 0 | 1.0 | 5.0 | −1.0 | −4.0 |  | , |  | 14 |  | , |
| *A* =4.0 |  |  | b = |  |
|  | −1.0 | 1.0 | −1.0 | | 0 | 3.0 | 1.0 | 1.0 |  |  |  | 10 |  |  |
| 1.0 |  |  |  |  |  |
| *x нач* =(4 | 0 6 | 0 4 | 0 | 0 | 0) ', | *JБ* ={1 3 | | 5}. |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 17** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6 9−5 2−6 | | | | 0 1 3) ', | |  |  |  |  |  |  |  |  |  |  |
| − 2.0 −1.0 | | | 3.0 | − 7.5 | 0 | 0 | 0 | 2.0 | |  |  |  | − 23.5 |  |  |
|  | 4.0 | 2.0 | − 6.0 | 0 | 1.0 | 5.0 −1.0 | |  | − 4.0 |  | , |  | −24.0 |  | , |
| *A* = |  |  | b = |  |
|  | 1.0 | − 1.0 | 0 | −1.0 | 0 | 3.0 1.0 | | | 1.0 |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |
| *x нач* =(0 | | 0 0 | 5 4 | 0 0 | 7) ', | *JБ* | = {4 | 5 | 8}. |  |  |  |  |  |  |

**Задача 18**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(6−9 5−2 6 0−1 3) ', | | | | | | | | |  |  |  |  |  |
| −2 −1 | | | 1 −7 0 | | | 0 | 0 2 |  |  |  | − 2 | |  |
|  | 4 2 | | −1 0 1 5 −1 −5 | | | | | |  |  | 14 |  | , |
| *A* = |  | , b = |  |
|  |  | 11 0 1 0 | | | | 3 | 1 1 |  |  |  | 4 |  |  |
| 1 |  |  |  |  |  |  |
| *x нач* =(4 | | 0 | 6 | 0 | 4 0 | | 0 0) | ', |  | *JБ* ={1 2 | 3}. |  |  |

**Задача 19**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−5 2 3−4−6 0 1−5) ' | | | | | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 36 |  |  |
|  |  | 0 1 | | 4 1 0 −8 1 5 | | | | | |  |  |  |
|  |  |  |  |  | −11 |  |  |
| *A* = |  | 0 | −1 0 −1 0 0 | | | | | 0 | 0 |  | , b = |  |  | , |
|  |  |  | 10 |  |
|  |  | 0 | 2 | −1 | 0 −1 3 | | | −1 0 | |  |  |  | 20 |  |  |
|  |  | 1 | 1 | 1 | 1 | 0 | 3 | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *x нач* =(4 | 5 0 | 6 0 0 0 5) ', | *JБ* ={1 | 2 4 | 8}. |

**Задача 20**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 15 | |  |  |
|  | 0 1.0 | | 1.0 | 1.0 | 0 − 8.0 | | 1.0 | 5.0 |  |  |  |  |
|  |  |  |  |  | −45 |  |  |
|  | 0 | −1.0 | 0 | − 7.5 | 0 | 0 | 0 | 2.0 |  | , | b = |  |  | , |
| *A* = |  |  | 1.8 |  |
|  | 0 | 2.0 | 1.0 | 0 | − 1.0 | 3.0 | −1.4 | 0 |  |  |  |  | 19 |  |  |
|  |  | 1.0 | 1.0 | 1.0 | 0 | 3.0 | 1.0 | 1.0 |  |  |  |  |  |  |
| 1.0 | |  |  |  |  |  |  |  |
| *x нач* =(4 | | 0 6 | 6 | 0 0 3 | 0) ', | *JБ* ={1 | | 3 4 | 7}. |  |  |  |  |  |  |

**Задача 21**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | | | |  |  | |  |  |  |  | |  | |  |  |
| 0 | − 1.0 | | 1.0 | | − 7.5 | | 0 | | 0 | 0 | | 2.0 |  |  |  | | 6 | |  |  |
|  | 2.0 | | 1.0 | | 0 | | − 1.0 | | 3.0 | −1.5 | | 0 |  | , |  | |  | |  | , |
| *A* =0 |  | b = 1.5 | | | |  |
|  | − 1.0 | | 1.0 | | −1.0 | | 0 | | 3.0 | 1.0 | | 1.0 |  |  |  | | 10 | |  |  |
| 1.0 |  |  |  | |  |  |
| *x нач* =(4.0 | | 0 | | 6.0 | | 0 4.5 | | 0 | | 0 | 0) ', *JБ* | | | | | = {1 3 | | 5}. | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 22** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6−9−5 2−6 | | | | 0 1 3) ', | | |  |  |  |  |  |  |  |  |
| 2.0 | − 1.0 | 1.0 | − 7.5 | | 0 | 0 | 0 | 2.0 |  |  | 14 | |  |  |
|  | 2.0 | − 1.0 |  | 0 | 1.0 | 5.0 | −1.0 | −4.0 |  | , |  | 14 |  | , |
| *A* =4.0 |  |  | b = |  |
|  | −1.0 | 1.0 | −1.0 | | 0 | 3.0 | 1.0 | 1.0 |  |  |  | 10 |  |  |
| 1.0 |  |  |  |  |  |
| *x нач* =(4 | 0 6 | 0 4 | 0 | 0 | 0) ', | *JБ* ={1 3 | | 5}. |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 23** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6 9−5 2−6 | | | | 0 1 3) ', | |  |  |  |  |  |  |  |  |  |  |
| − 2.0 −1.0 | | | 3.0 | − 7.5 | 0 | 0 | 0 | 2.0 | |  |  |  | − 23.5 |  |  |
|  | 4.0 | 2.0 | − 6.0 | 0 | 1.0 | 5.0 −1.0 | |  | − 4.0 |  | , |  | −24.0 |  | , |
| *A* = |  |  | b = |  |
|  | 1.0 | − 1.0 | 0 | −1.0 | 0 | 3.0 1.0 | | | 1.0 |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |
| *x нач* =(0 | | 0 0 | 5 4 | 0 0 | 7) ', | *JБ* | = {4 | 5 | 8}. |  |  |  |  |  |  |

**Задача 24**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(6−9 5−2 6 0−1 3) ', | | | | | | | | |  |  |  |  |  |
| −2 −1 | | | 1 −7 0 | | | 0 | 0 2 |  |  |  | − 2 | |  |
|  | 4 2 | | −1 0 1 5 −1 −5 | | | | | |  |  | 14 |  | , |
| *A* = |  | , b = |  |
|  |  | 11 0 1 0 | | | | 3 | 1 1 |  |  |  | 4 |  |  |
| 1 |  |  |  |  |  |  |
| *x нач* =(4 | | 0 | 6 | 0 | 4 0 | | 0 0) | ', |  | *JБ* ={1 2 | 3}. |  |  |

**Задача 25**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−5 2 3−4−6 0 1−5) ' | | | | | | | | | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 36 |  |  |
|  |  | 0 1 | | 4 1 0 −8 1 5 | | | | | |  |  |  |
|  |  |  |  |  | −11 |  |  |
| *A* = |  | 0 | −1 0 −1 0 0 | | | | | 0 | 0 |  | , b = |  |  | , |
|  |  |  | 10 |  |
|  |  | 0 | 2 | −1 | 0 −1 3 | | | −1 0 | |  |  |  | 20 |  |  |
|  |  | 1 | 1 | 1 | 1 | 0 | 3 | 1 | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *x нач* =(4 | 5 0 | 6 0 0 0 5) ', | *JБ* ={1 | 2 4 | 8}. |

**Задача 26**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | 15 | |  |  |
|  | 0 1.0 | | 1.0 | 1.0 | 0 − 8.0 | | 1.0 | 5.0 |  |  |  |  |
|  |  |  |  |  | −45 |  |  |
|  | 0 | −1.0 | 0 | − 7.5 | 0 | 0 | 0 | 2.0 |  | , | b = |  |  | , |
| *A* = |  |  | 1.8 |  |
|  | 0 | 2.0 | 1.0 | 0 | − 1.0 | 3.0 | −1.4 | 0 |  |  |  |  | 19 |  |  |
|  |  | 1.0 | 1.0 | 1.0 | 0 | 3.0 | 1.0 | 1.0 |  |  |  |  |  |  |
| 1.0 | |  |  |  |  |  |  |  |
| *x нач* =(4 | | 0 6 | 6 | 0 0 3 | 0) ', | *JБ* ={1 | | 3 4 | 7}. |  |  |  |  |  |  |

**Задача 27**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(−6−9−5 2−6 0 1 3) ', | | | | | | | | |  |  | |  |  |  |  | |  | |  |  |
| 0 | − 1.0 | | 1.0 | | − 7.5 | | 0 | | 0 | 0 | | 2.0 |  |  |  | | 6 | |  |  |
|  | 2.0 | | 1.0 | | 0 | | − 1.0 | | 3.0 | −1.5 | | 0 |  | , |  | |  | |  | , |
| *A* =0 |  | b = 1.5 | | | |  |
|  | − 1.0 | | 1.0 | | −1.0 | | 0 | | 3.0 | 1.0 | | 1.0 |  |  |  | | 10 | |  |  |
| 1.0 |  |  |  | |  |  |
| *x нач* =(4.0 | | 0 | | 6.0 | | 0 4.5 | | 0 | | 0 | 0) ', *JБ* | | | | | = {1 3 | | 5}. | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 28** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6−9−5 2−6 | | | | 0 1 3) ', | | |  |  |  |  |  |  |  |  |
| 2.0 | − 1.0 | 1.0 | − 7.5 | | 0 | 0 | 0 | 2.0 |  |  | 14 | |  |  |
|  | 2.0 | − 1.0 |  | 0 | 1.0 | 5.0 | −1.0 | −4.0 |  | , |  | 14 |  | , |
| *A* =4.0 |  |  | b = |  |
|  | −1.0 | 1.0 | −1.0 | | 0 | 3.0 | 1.0 | 1.0 |  |  |  | 10 |  |  |
| 1.0 |  |  |  |  |  |
| *x нач* =(4 | 0 6 | 0 4 | 0 | 0 | 0) ', | *JБ* ={1 3 | | 5}. |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Задача 29** | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *c* =(−6 9−5 2−6 | | | | 0 1 3) ', | |  |  |  |  |  |  |  |  |  |  |
| − 2.0 −1.0 | | | 3.0 | − 7.5 | 0 | 0 | 0 | 2.0 | |  |  |  | − 23.5 |  |  |
|  | 4.0 | 2.0 | − 6.0 | 0 | 1.0 | 5.0 −1.0 | |  | − 4.0 |  | , |  | −24.0 |  | , |
| *A* = |  |  | b = |  |
|  | 1.0 | − 1.0 | 0 | −1.0 | 0 | 3.0 1.0 | | | 1.0 |  |  |  | 2.0 |  |  |
|  |  |  |  |  |  |
| *x нач* =(0 | | 0 0 | 5 4 | 0 0 | 7) ', | *JБ* | = {4 | 5 | 8}. |  |  |  |  |  |  |

**Задача 30**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *c* =(6−9 5−2 6 0−1 3) ', | | | | | | | | |  |  |  |  |  |
| −2 −1 | | | 1 −7 0 | | | 0 | 0 2 |  |  |  | − 2 | |  |
|  | 4 2 | | −1 0 1 5 −1 −5 | | | | | |  |  | 14 |  | , |
| *A* = |  | , b = |  |
|  |  | 11 0 1 0 | | | | 3 | 1 1 |  |  |  | 4 |  |  |
| 1 |  |  |  |  |  |  |
| *x нач* =(4 | | 0 | 6 | 0 | 4 0 | | 0 0) | ', |  | *JБ* ={1 2 | 3}. |  |  |