Санкт-Петербургский национальный исследовательский университет ИТМО Факультет программной инженерии и компьютерной техники

**Домашняя работа №2**

по дисциплине “Дискретная математика”

Вариант 35

Выполнил:

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группа P3130

Преподаватель:

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Санкт-Петербург

2023

|  |  |
| --- | --- |
| **A** | **B** |
| 94 | 23 |

1. *А* = 94, *В* = 23.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |  | 94 |  | 94 |
| *B*пр. | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |  | 23 |  | 23 |
| *С*пр. | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |  | 117 |  | 117 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CF=0, | ZF=0, | PF=0, | AF=1, | SF=0, | OF=0. |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |  | 94 |  | 94 |
| *B*доп. | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |  | -23 |  | 151 |
| *С*пр. | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |  | 71 |  | 71? |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CF=1, | ZF=0, | PF=0, | AF=1, | SF=0, | OF=0. |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | | |  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая | | | *А*доп | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |  | -94 |  | 222 | | | *B*пр. | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |  | 23 |  | 23 | | | *С*дп. | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |  |  |  | 245 | | | *С*пр. | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |  | -71 |  | |  | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | CF=0, | ZF=0, | PF=0, | AF=1, | SF=1, | OF=1. | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая | |
| *А*доп | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |  | -94 |  | 222 | |
| *B*пр. | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |  | -23 |  | 151 | |
| *С*дп. | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |  |  |  | 373 | |
| *С*пр. | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |  | -121 |  | |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=0, | ZF=0, | PF=0, | AF=0, | SF=1, | OF=0. |

1. **B = 64; A = 94;**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *В* | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

*А*

7 0 7 0

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |  | 94 |  | 94 |
| *B*пр. | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  | 64 |  | 64 |
| *С*доп. | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |  |  |  | 158 |
| *С*пр. | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |  | -30? |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=0, | ZF=0, | PF=1, | AF=0, | SF=1, | OF=1. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*доп. | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |  | -94 |  | 222 |
| *B*доп. | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  | -64 |  | 192 |
| *С*пр. | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |  | -30? |  | 158? |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=1, | ZF=0, | PF=1, | AF=0, | SF=1, | OF=1. |

1. **A = 102 = 0|1101001; B = 23 = 0|0010111;**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | Интерпретации | | | | | | |
|  |  |  |  |  |  |  | |  |  |  | Знаковая |  | Беззнаковая | |
| *А*пр. | 0 | 1 | 1 | 0 | 1 | 0 | | 0 | 1 |  | 105 |  | 105 | |
| *B*пр. | 0 | 0 | 0 | 1 | 0 | 1 | | 1 | 1 |  | 23 |  | 23 | |
| *С*доп. | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |  |  |  | 128 | |
| *С*пр. | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |  | -128? |  |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=0, | ZF=0, | PF=0, | AF=1, | SF=1, | OF=1. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | Интерпретации | | | | | | |
|  |  |  |  |  |  |  | |  |  |  | Знаковая |  | Беззнаковая | |
| *А*пр. | 1 | 1 | 1 | 0 | 1 | 0 | | 0 | 1 |  | -105 |  | 233 | |
| *B*пр. | 1 | 0 | 0 | 1 | 0 | 1 | | 1 | 1 |  | -23 |  | 151 | |
| *С*доп. | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |  |  |  | 384 | |
| *С*пр. | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |  | -128? |  |  | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=1, | ZF=0, | PF=0, | AF=1, | SF=1, | OF=1. |