**Вычитание целых чисел.** Лебедев Вадим.

P3110.

Вариант 7.

*А* = 107, *В* = 15.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*пр. | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |  | 107 |  | 107 |
| *B*пр. | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |  | 15 |  | 15 |
| *C*пр. | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |  | 92 |  | 92 |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |  | -107 |  | 149 |
| *B*пр. | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |  | 15 |  | 15 |
| *C*доп. | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |  |  |  | 134 |
| *C*пр. | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |  | -122 |  |  |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*пр. | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |  | 107 |  | 67 |
| *B*доп. | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |  | -15 |  | 241 |
| *C*пр. | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |  | 122 |  | 122? |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=1, | ZF=0, | PF=1, | AF=1, | SF=0, | OF=0. |
| Для беззнаковой интерпретации результат неверен вследствие возникающего заёма из разряда за пределами формата | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |  | -107 |  | 149 |
| *B*доп. | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |  | -15 |  | 241 |
| *C*доп. | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |  |  |  | 228? |
| *C*пр. | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |  | -122 |  |  |

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

Для беззнаковой интерпретации результат неверен вследствие возникающего заёма из разряда за пределами формата.

1. *А* = 107 (неизменно), *В* = 24 (подбираем).

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 |  | -107 |  | 149 |
| *B*пр. | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |  | 24 |  | 24 |
| *C*пр. | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |  | 125? |  | 125 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=0, | ZF=0, | PF=1, | AF=0, | SF=0, | OF=1. |
| Для знаковой интерпретации результат некорректен вследствие возникающего переполнения | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*пр. | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 |  | 67 |  | 67 |
| *B*доп. | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |  | -64 |  | 192 |
| *C*доп. | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |  |  |  | 131? |
| *C*пр. | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |  | -125? |  |  |

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

Для знаковой интерпретации результат некорректен вследствие возникающего переполнения, для беззнаковой интерпретации результат некорректен из-за возникающего заёма из старшего разряда

1. (A = 113)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*пр. | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |  | 113 |  | 113 |
| *B*доп. | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |  | -15 |  | 241 |
| *C.* | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | -128? |  | 128? |

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

Результат беззнаковой интерпретации некорректен вследствие возникающего заёма из разряда за пределами формата, для знаковой интерпретации результат некорректен из-за переполнения.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |  | -113 |  | 143 |
| *B*пр. | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |  | 15 |  | 15 |
| *C*. | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | -128 |  | 128 |

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

Результаты знаковой и беззнаковой интерпретаций корректны