Имя:Хатиь Ватан группа:.р3113 вариант:107 задания 2

**СЛОЖЕНИЕ ЦЕЛЫХ ЧИСЕЛ**

**1.**

|  |  |  |
| --- | --- | --- |
| **107.** | 58 | 47 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |  | 58 |  | 58 |
| *B*пр. | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |  | 47 |  | 47 |
| *С*пр. | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |  | 105 |  | 105 |

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая | |
| *А*пр | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |  | 58 |  | 58 | |
| *B*доп. | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |  | -47 |  | 209 | |
| *С*пр. | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |  | 11 |  | 11? | |

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

Для беззнаковой интерпретации результат неверен вследствие возникающего переноса из старшего разряда. Вес этого переноса составляет 256.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*доп. | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |  | -58 |  | 198 |
| *B*пр. | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |  | 47 |  | 47 |
| *С*доп. | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |  |  |  | 245 |
| *С*пр | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |  | -11 |  |  |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*доп. | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |  | -58 |  | 198 |
| *B*доп. | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |  | -47 |  | 209 |
| *С*доп. | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |  |  |  | 151? |
| *С*пр. | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 |  | -105 |  |  |

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

Для беззнаковой интерпретации результат неверен вследствие возникающего переноса из старшего разряда. Вес этого переноса составляет 256.

**2.** Cохранив значение первого операнда ***А***, выбрать такое значение ***В***, чтобы в операции сложения с одинаковыми знаками имел место особый случай переполнения формата. Выполнить два примера, иллюстрирующие эти случаи, для каждого из них проделать пункты a, b, c, d.

127>B>69 допостим B = 90

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

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

A

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 |  | 58 |  | 58 |
| *B*пр. | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |  | 90 |  | 90 |
| *С*доп. | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |  |  |  | 148 |
| *С*пр. | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 |  | -121? |  |  |

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

Для знакового сложения результат является некорректным вследствие переполнения формата

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая | |
| *А*доп. | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |  | -58 |  | 198 | |
| *B*доп. | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |  | -90 |  | 166 | |
| *С*пр. | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |  | 108? |  | 108? | |

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

Для знаковой интерпретации результат неверен вследствие возникающего переполнения, для беззнаковой интерпретации результат неверен вследствие возникающего переноса из старшего разряда

3. Сохранив операнд ***В***, подавать такое значение операнда ***А***, чтобы при сложении положительных операндов имело место переполнение формата, а при сложении отрицательных операндов результат был бы корректен. Выполнить два примера, иллюстрирующие этот случай. Для каждого из них проделать пункты a, b, c, d.

B= 47

A+ 47 = 128

A=81

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

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

A

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | Интерпретации | | | | | | |
|  |  |  |  |  |  |  | |  |  |  | Знаковая |  | Беззнаковая | |
| *А*пр. | 0 | 1 | 0 | 1 | 0 | 0 | | 0 | 1 |  | 81 |  | 81 | |
| *B*пр. | 0 | 0 | 1 | 0 | 1 | 1 | | 1 | 1 |  | 47 |  | 47 | |
| *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. |

Для знаковой интерпретации результат некорректен вследствие возникающего переполнения.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*доп. | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 |  | -81 |  | 175 |
| *B*доп. | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |  | -47 |  | 209 |
| *С*доп. | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 128? |
| *С*пр. | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | -128 |  |  |

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

Для беззнаковой интерпретации результат неверен вследствие возникающего переноса из старшего разряда, результат знаковой интерпретации корректен