**Сложение целых чисел.** Лебедев Вадим.

P3110.

Вариант 6.

*А* = 65, *В* = 53.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |  | 65 |  | 65 |
| *B*пр. | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |  | 53 |  | 53 |
| *С*пр. | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |  | 118 |  | 118 |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |  | 65 |  | 65 |
| *B*доп. | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |  | -53 |  | 203 |
| *С*пр. | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |  | 12 |  | 12? |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CF=1, | ZF=0, | PF=1, | 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 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  | -65 |  | 191 | | | *B*пр. | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |  | 53 |  | 53 | | | *С*доп. | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |  |  |  | 244 | | | *С*пр. | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |  | -12 |  | |  | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | CF=0, | ZF=0, | PF=0, | AF=0, | SF=1, | OF=0. | | | | | | | | | | | | | | | |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*доп. | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  | -65 |  | 191 |
| *B*доп. | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |  | -53 |  | 203 |
| *С*доп. | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |  |  |  | 138? |
| *С*пр. | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |  | -118 |  |  |

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

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

*А + В* > 128, значит 127*>B* >128 - *A*, пусть *В* = 90.

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

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

*А*

7 0 7 0

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*пр. | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |  | 65 |  | 65 |
| *B*пр. | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |  | 90 |  | 90 |
| *С*доп. | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |  |  |  | 155 |
| *С*пр. | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |  | -101? |  |  |

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

Для знакового сложения результат является некорректным вследствие переполнения формата.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *А*доп. | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  | -65 |  | 191 |
| *B*доп. | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |  | -90 |  | 166 |
| *С*пр. | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 |  | 101? |  | 101 ? |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CF=1, | ZF=0, | PF=0, | 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

A=75

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *B* | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |

*А*

7 0 7 0

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | Интерпретации | | | | | | |
|  |  |  |  |  |  |  | |  |  |  | Знаковая |  | Беззнаковая | |
| *А*пр. | 0 | 1 | 0 | 0 | 1 | 0 | | 1 | 1 |  | 75 |  | 75 | |
| *B*пр. | 0 | 0 | 1 | 1 | 0 | 1 | | 0 | 1 |  | 53 |  | 53 | |
| *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 | 1 | 0 | 1 | 0 | 1 |  | -75 |  | 177 |
| *B*доп. | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 |  | -53 |  | 207 |
| *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.