Задание 3

Вариант 4.

***Прим.***

***Я по невнимательности взял числа А и B из таблицы 4 в приложении вместо таблицы 3. Надеюсь, это не критично, однако, если необходимо, я готов переделать задание.***

|  |  |
| --- | --- |
| А | B |
| 20 | 83 |

1. *А* = 20, *В* = 83.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* > 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |  | 20 |  | 20 |
| *B*пр. | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |  | 83 |  | 83 |
| *C*доп. | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |  |  |  | 193 |
| *C*пр. | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  | -63 |  |  |

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

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

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| *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |  | -20 |  | 236 |
| *B*пр. | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |  | 83 |  | 83 |
| *C*доп. | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |  |  |  | 153 |
| *C*пр. | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |  | -103 |  |  |

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

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| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*пр. | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |  | 20 |  | 20 |
| *B*доп. | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |  | -83 |  | 173 |
| *C*пр. | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |  | 103 |  | 103? |

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

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| *А* < 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |  | -20 |  | 236 |
| *B*доп. | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |  | -83 |  | 173 |
| *C*пр. | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |  | 63 |  | 63 |

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

1. Правило для подбора выглядит следующим образом:

*А + В* > 128, значит 128 – *А < В* < 127

*А* = 20 (неизменно), *В* = 120 (подбираем).

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| *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |  | -20 |  | 236 |
| *B*пр. | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |  | 120 |  | 120 |
| *C*пр. | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |  | 116? |  | 116 |

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

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| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*пр. | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |  | 20 |  | 20 |
| *B*доп. | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |  | -120 |  | 136 |
| *C*доп. | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |  |  |  | 140? |
| *C*пр. | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |  | -116? |  |  |

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

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

1. Значение числа *В* фиксируем *(В* = 83), а значение *А* подбираем согласно формуле *А + В* = 128, благодаря которой при вычитании из положительного числа отрицательного будет фиксироваться переполнение, а при вычитании из отрицательного числа положительного не будет. Тогда *А* = 50.

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| *А* > 0, *B* < 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*пр. | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |  | 50 |  | 50 |
| *B*доп. | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |  | -83 |  | 173 |
| *Cдоп.* | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |  |  |  | 133? |
| *Cпр.* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |  | -123? |  |  |

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

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *А* < 0, *B* > 0. | | | | | | | | | Интерпретации | | | |
|  |  |  |  |  |  |  |  |  |  | Знаковая |  | Беззнаковая |
| *A*доп. | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |  | -50 |  | 206 |
| *B*пр. | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |  | 83 |  | 83 |
| *C*пр | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 |  | 123? |  | 123 |

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

Для знаковой интерпретации результат некорректен из-за переполнения.