1. Пронормировать исходное число так, чтобы мантисса имела значение от 0.1 до 0.99…9

-0.0874 -> -0.874\*10-1

0.874 – мантисса.

Степень десятки (1) – порядок нормированного числа.

1. Выписать дробную часть как целое число и перевести в двоичную систему.

87410 = 1101101010­2

1. Выписать модуль порядка нормированного числа и перевести в двоичную систему.

110 = 12

1. Заполнить 8-байтовый шаблон.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 байт | | | | | | | | 6 байт | | | | | | | | 5 байт | | | | | | | | 4 байт | | | | | | | |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| а | б |  |  |  |  |  |  |  |  |  |  |  |  |  | в |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 байт | | | | | | | | 2 байт | | | | | | | | 1 байт | | | | | | | | 0 байт | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | г |  |  |  |  |  |  |  |  |  |

а – знак мантиссы

б – знак порядка

в – значение порядка

г – значение мантиссы

1. Пронормировать исходное число так, чтобы мантисса имела значение от 0.1 до 0.99…9

623.1 -> 0.6231\*103

0.6231 – мантисса.

Степень десятки (3) – порядок нормированного числа.

1. Выписать дробную часть как целое число и перевести в двоичную систему.

623110 = 11000010101112

1. Выписать модуль порядка нормированного числа и перевести в двоичную систему.

310 = 112

1. Заполнить 8-байтовый шаблон.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 байт | | | | | | | | 6 байт | | | | | | | | 5 байт | | | | | | | | 4 байт | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| а | б |  |  |  |  |  |  |  |  |  |  |  |  | в |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 байт | | | | | | | | 2 байт | | | | | | | | 1 байт | | | | | | | | 0 байт | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | г |  |  |  |  |  |  |  |  |  |  |  |  |

а – знак мантиссы

б – знак порядка

в – значение порядка

г – значение мантиссы