

$$A=2,1, B=0,08$$

### 1. Формат Ф1

$$A = (2.1)_{10} = (2,19999A)_{16} = (0,219999A)_{16} \cdot 16^1$$

0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	1	0
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$$B = (0.08)_{10} = (0,147AE1)_{16} = (0,147AE1)_{16} \cdot 16^0$$

0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0
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$$\text{SignC} = \text{SignA} \oplus \text{SignB}.$$

$$X_A = P_A + d; X_B = P_B + d;$$

$$X_C = X_A + X_B - d;$$

$$P_C + d = \frac{P_A + d + P_B}{P_C} + d - d.$$

$$\begin{array}{rcl} X_A & = & 1000001 \\ & + & \\ X_B & = & 1000000 \\ \hline X_A + X_B & = & 10000001 \\ & - & \\ d & = & 1000000 \\ \hline X_C & = & 1000001 \end{array}$$

$$P_C = 1$$

таблица1, дз7.xlsx

$$X_C = X_C - 1$$

$$C = (0,2B1)_{16} \cdot 16^0 = 0,16821289.$$

Определим абсолютную и относительную погрешности результата:

$$\Delta C = 0,168 - 0,16821289 = -0,00021289$$

$$\delta C = \left| \frac{-0,00021289}{0,168} \right| \cdot 100\% = 0,12672061\%$$

## 2. Формат Ф2

$$A = (2.1)_{10} = (2,19999A)_{16} = (0,10000110011001101)_2 \cdot 2^2$$

0	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	1	0
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$$B = (0.08)_{10} = (0,147AE1)_{16} = (0,10100011111011)_2 \cdot 2^{-3}$$

0	0	1	1	1	1	1	0	1	0	1	0	0	0	1	1	1	1	0	1
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$$X_A = 10000010$$

+

$$X_B = 01111101$$

$$X_A + X_B = 11111111$$

-

$$d = 10000000$$

$$X_C = 01111111$$

$$P_C = -1$$

таблица2, дз7.xls/x

$$X_C = X_C - 1$$

$$C = (0,101010111111)_2 \cdot 2^{-2} = 0,16790771.$$

Определим абсолютную и относительную погрешности результата:

$$\Delta C = 0,168 - 0,16790771 = 0,00009229$$

$$\delta C = \left| \frac{0,00009229}{0,168} \right| \cdot 100\% = 0,05493164\%$$

Погрешности результатов вызваны неточным представлением операндов. В формате Ф2 операнды представлены точнее и погрешность меньше.