

A = 6.3
B = 0.047

1. Формат Ф1

$$A = (6.3)_{10} = (6,4CCCCD)_{16} = (0,64CCCCD)_{16} \cdot 16^1$$

0	1	0	0	0	0	0	1	0	1	1	0	0	1	0	1
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

$$B = (0.047)_{10} = (0,0C0831)_{16} = (0,C0831)_{16} \cdot 16^{-1}$$

0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	1
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

$$X_C = X_A - X_B + d$$

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

$$X_C = 1 - (-1) + 64 = 66$$

$$P_C = 2$$

№ шага	Действие	Делимое	Частное
0	M_A [- M_B] _{доп} R_0	0 0 1 1 0 0 1 0 1 1 0 0 1 1 1 1 1 1 1 1 0 1 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1	$\leftarrow R_0$ [M_B] _{нр} R_1	1 0 1 0 0 1 0 0 0 0 1 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
2	$\leftarrow R_1$ [- M_B] _{доп} R_2	0 0 0 0 1 0 0 1 0 1 0 0 1 1 1 1 1 1 1 0 1 0 1 0 0 0 1	0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0
3	$\leftarrow R_2$ [M_B] _{нр} R_3	0 1 0 1 0 0 0 1 0 0 1 1 0 0 0 0 0 1 1 0 1 1 0 0 0 1 1	0 0 0 0 0 1 0 0 0 0 0 0 0 1 0 0
4	$\leftarrow R_3$ [M_B] _{нр} R_4	0 1 1 0 0 0 1 1 0 0 1 1 0 0 0 0 0 1 1 1 0 0 0 0 1 1 1	0 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0
5	$\leftarrow R_4$ [M_B] _{нр} R_5	1 0 0 0 0 1 1 1 0 0 1 1 0 0 0 0 0 1 1 1 1 0 0 1 1 1 1	0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0
6	$\leftarrow R_5$ [M_B] _{нр} R_6	1 1 0 0 1 1 1 1 0 0 1 1 0 0 0 0 0 1 0 0 1 0 1 1 1 1 1	0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1
7	$\leftarrow R_6$ [- M_B] _{доп} R_7	0 1 0 1 1 1 1 1 0 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1	0 1 0 0 0 0 1 0 0 1 0 0 0 0 1 0
8	$\leftarrow R_7$ [M_B] _{нр} R_8	1 1 1 1 1 1 0 1 0 0 1 1 0 0 0 0 0 1 0 1 0 1 1 1 0 1 1	1 0 0 0 0 1 0 0 1 0 0 0 0 1 0 1

$$C = (0,85)_{16} \cdot 16^2 = 133.$$

Определим абсолютную и относительную погрешности результата:

$$\Delta C = 134,04255319 - 133 = 1,04255319$$

$$\delta C = \left| \frac{1,04255319}{134,04255319} \right| \cdot 100\% = 0,77777778\%$$

2. Формат Ф2

$$A = (6,3)_{10} = (6,4CCCCD)_{16} = (0,1100100110011001101)_2 \cdot 2^3$$

0	1	0	0	0	0	0	1	1	1	0	0	1	0	1	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

$$B = (0,047)_{10} = (0,0C0831)_{16} = (0,110000001)_2 \cdot 2^{-4}$$

0	0	1	1	1	1	0	0	1	0	0	0	0	0	1
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

$$X_C = X_A - X_B + d$$

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

$$X_C = 3 - (-4) + 128 = 135$$

$$P_C = 7$$

№ шага	Действие	Делимое	Частное
0	M_A $[-M_B]_{\text{доп}}$ R_0	0 1 1 0 0 1 0 1 0 1 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 0 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
1	$\leftarrow R_0$ $[-M_B]_{\text{доп}}$ R_1	0 0 0 0 1 0 0 1 0 1 0 0 1 1 1 1 1 1 1 0 1 0 1 0 0 0 1	0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0
2	$\leftarrow R_1$ $[M_B]_{\text{нр}}$ R_2	0 1 0 1 0 0 0 1 0 0 1 1 0 0 0 0 0 1 1 0 1 1 0 0 0 1 1	0 0 0 0 0 1 0 0 0 0 0 0 0 1 0 0
3	$\leftarrow R_2$ $[M_B]_{\text{нр}}$ R_3	0 1 1 0 0 0 1 1 0 0 1 1 0 0 0 0 0 1 1 1 0 0 0 0 1 1 1	0 0 0 0 1 0 0 0 0 0 0 0 1 0 0 0
4	$\leftarrow R_3$ $[M_B]_{\text{нр}}$ R_4	1 0 0 0 0 1 1 1 0 0 1 1 0 0 0 0 0 1 1 1 1 0 0 1 1 1 1	0 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0
5	$\leftarrow R_4$ $[M_B]_{\text{нр}}$ R_5	1 1 0 0 1 1 1 1 0 0 1 1 0 0 0 0 0 1 0 0 1 0 1 1 1 1 1	0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1
6	$\leftarrow R_5$ $[-M_B]_{\text{доп}}$ R_6	0 1 0 1 1 1 1 1 0 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1	0 1 0 0 0 0 1 0 0 1 0 0 0 0 1 0

7	$\leftarrow R_6$	1 1 1 1 1 1 0 1 0	1 0 0 0 0 1 0 0
	$[MB]_{np}$	0 1 1 0 0 0 0 0 1	
	R_7	0 1 0 1 1 1 0 1 1	1 0 0 0 0 1 0 1
	$MC \rightarrow$		0 1 0 0 0 0 1 0 1

$$C = (0,10000101)_2 \cdot 2^8 = 133.$$

Определим абсолютную и относительную погрешности результата:

$$\Delta C = 134,04255319 - 133 = 1,04255319$$

$$\delta C = \left| \frac{1,04255319}{134,04255319} \right| \cdot 100\% = 0,77777778\%$$

Погрешности результатов вызваны неточным представлением операндов. В формате Ф1 и Ф2 операнды представлены одинаково точно.