

**Домашнее задание 8. Дискретная математика.**

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**Вариант 13.**

$$A = 8.2$$

$$B = 0.45$$

**1. Формат 01**

$$A = (8.2)_{10} = (8.(3))_{16} = (0.8(3))_{16} \cdot 16^1$$

0	1	0	0	0	0	0	1	1	0	0	0	0	0	1	1
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$$B = (0.45)_{10} = (0.7(3))_{16} = (0.7(3))_{16} \cdot 16^0$$

0	1	0	0	0	0	0	0	0	1	1	1	0	0	1	1
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**2. Формат 02**

$$A = (8.2)_{10} = (1000.001(1001))_2 = (0.10000011)_2 \cdot 2^4$$

0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1
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$$B = (0.45)_{10} = (0.011(1001))_2 = (0.11100110)_2 \cdot 2^{-1}$$

0	0	1	1	1	1	1	1	1	1	1	0	0	1	1	0
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## Формат Ф2

$$X_C = X_A - X_B + d$$

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

$$X_C = 4 - (-1) + 128 = 133$$

$$P_C = 5$$

№ шага	Действие	Делимое	Частное
0	$M_A$ [ - $M_B$ ] <sub>доп</sub> $R_0$	0 1 0 0 0 0 0 1 1 1 1 0 0 0 1 1 0 1 0 0 0 0 1 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
1	$\leftarrow R_0$ [ - $M_B$ ] <sub>доп</sub> $R_1$	0 0 0 1 0 0 0 0 0 1 1 0 0 0 1 1 0 1 1 1 0 1 0 1 1 0 1	0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0
2	$\leftarrow R_1$ $M_B$ пр $R_2$	1 0 1 0 1 1 0 1 0 0 0 1 1 1 0 0 1 1 1 1 1 0 0 1 1 0 1	0 0 0 0 0 1 0 0 0 0 0 0 0 1 0 0
3	$\leftarrow R_2$ $M_B$ пр $R_3$	1 1 0 0 1 1 0 1 0 0 0 1 1 1 0 0 1 1 0 0 0 0 0 1 1 0 1	0 0 0 0 1 0 0 0 0 0 0 0 1 0 0 1
4	$\leftarrow R_3$ [ - $M_B$ ] <sub>доп</sub> $R_4$	0 0 0 0 1 1 0 1 0 1 1 0 0 0 1 1 0 1 1 1 0 1 0 0 1 1 1	0 0 0 1 0 0 1 0 0 0 0 1 0 0 1 0
5	$\leftarrow R_4$ $M_B$ пр $R_5$	1 0 1 0 0 1 1 1 0 0 0 1 1 1 0 0 1 1 1 1 1 0 0 0 0 0 1	0 0 1 0 0 1 0 0 0 0 1 0 0 1 0 0
6	$\leftarrow R_5$ $M_B$ пр $R_6$	1 1 0 0 0 0 0 1 0 0 0 1 1 1 0 0 1 1 1 1 1 1 1 0 1 0 1	0 1 0 0 1 0 0 0 0 1 0 0 1 0 0 0
7	$\leftarrow R_6$ $M_B$ пр $R_7$  $M_C$	1 1 1 1 0 1 0 1 0 0 0 1 1 1 0 0 1 1 0 0 1 0 1 1 1 0 1	1 0 0 1 0 0 0 1 1 0 0 1 0 0 0 1

$$C^* = (0.10010001)_2 \cdot 2^5 = (10010.001)_2 = 18.125$$

$$C^T = 18.(2) \text{ (точное значение).}$$

Определим абсолютную и относительную погрешности результата:

$$\Delta C = 18.125 - 82,5 = -0.09722222$$

$$\delta C = \left| \frac{0.09722222}{18.125} \right| \cdot 100\% = 0.53\%$$

Погрешность вызвана неточным представлением операндов.

$$X_C = X_A - X_B + d$$

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

$$X_C = 1 - 0 + 64 = 65$$

$$P_C = 1$$

№ шага	Действие	Делимое	Частное
0	$M_A$ [ - $M_B$ ] <sub>доп</sub> $R_0$		
1	$\leftarrow R_0$ [ - $M_B$ ] <sub>доп</sub> $R_1$		
2	$\leftarrow R_1$ $M_B$ пр $R_2$		
3	$\leftarrow R_2$ [ - $M_B$ ] <sub>доп</sub> $R_3$		
4	$\leftarrow R_3$ $M_B$ пр $R_4$		
5	$\leftarrow R_4$ $M_B$ пр $R_5$		
6	$\leftarrow R_5$ [ - $M_B$ ] пр $R_6$		
7	$\leftarrow R_6$ $M_B$ пр $R_7$ $M_C \rightarrow$		