Домашнее задание №1.

Вариант № 110114

№1. A = 1825 B = 0,76

а) 0000.0001.1000.0010.0101

б) 0011.0001, 0011.1000 0011.0010, 0011.0101

№2.

$1825_{10} = 11100100001_2$

0000.0111.0010.0001

$[-A]_{пр}$ = 1.000 0111 0010 0001 – прямой

$[-A]_{обр}$ = 1.111 1000 1101 1110 – обратный

\+ 1

$[-A]_{доп}$ 1.111 1000 1101 1111

№3

$A = (1825)_{10} = (721)_{16} = (0,721)_{16} \cdot 16^3$

$X_A = P_A + 64 = (67)_{10} = (1000011)_2$

0 1000011 0111 0010 0001 0000

\+ характер. мантисс

$B = (0,76)_{10} \approx (0,C28F5C2)_{16} \approx (0,C28F5C)_{16} = (0,C28F5C)_{16} \cdot 16^0$

$X_B = P_B + 64 = (64)_{10} = (1000000)_2$

0 1000000 1100 0010 1000 1111 0101 1100

\+ характер. мантисс

№4.

$A = (1825)_{10} = (721)_{16} = (11100100001)_2 = (0,11100100001)_2 \cdot 2^{11}$

$X_A = P_A + 128 = (139)_{10} = (10001011)_2$

0 10001011 *11001000010000000000000

$B = (0,76)_{10} \approx (0,C28F5C2)_{16} \approx (0,C28F5C)_{16} \approx$

$\approx (0,11000010100011110101110)_2 \cdot 2^0$

$X_B = P_B + 128 = (128)_{10} = (1000000)_2$

0 10000000 *10000101000111101011100

~5.

$A = (1825)_{10} = (721)_{16} = (1110010001)_2 = (1,1100100001)_2 \cdot 2^{10}$

$X_A = P_A + 127 = (137)_{10} = (10001001)_2$

0 10001001 11001000010000000000000

~~16~~

$B = (0,76)_{10} \approx (0,C28F5C2)_{16} \approx (0,C28F5C)_{16} \approx$

$\approx (1,10000101000111101011100)_2 \cdot 2^{-1}$

$X_B = P_B + 127 = (126)_2 = (01111110)_2$

~~0 10000101~~

0 01111110 10000101000111101011100

№6. $R = 436A7600$ $S = BDBC0000$

0 1000011 0110 1010 0111 0110 0000 0000

$X_y = 67 = 64 + 3$

$P_y = 3$

$y = (6A76)_{16} \cdot 16^3 = (6A7,6)_{16} = (1703,375)_{10}$

1 011 1100 1011 1100 0000 0000 0000 0000

$X_z = 63 = 64 + (-1)$

$P_z = -1$

$z = -(0,BC)_{16} \cdot 16^{-1} = -(0,0BC)_{16} = -(0,045898437 5)_{10}$

№7

$\underbrace{0}\underbrace{10000110}\underbrace{1010011100000000}$

$X_v = 134 = 128 + 6$

$P_v = 6$

$V = (0{,}11010100111011)_2 \cdot 2^6 = (111010{,}100111011)_2 = (58{,}61523437\overline{5})_{10}$

$\underbrace{1}\underbrace{01111011}\underbrace{0111100000000000}$

$X_w = 123 = 128 + (-5)$

$P_w = -5$

$W = -(0{,}101111)_2 \cdot 2^{-5} = -(0{,}00000101111)_2 = -(0{,}02294921875)_{10}$

~8

0 10000110 1101010011101100000000

$X_T = 134 = 127 + 7$

$P_T = 7$

$T = (1,11010100111011)_2 \cdot 2^7 = (11101010,0111011)_2 =$

$= (234,4609375)_{10}$

1 01111011 01111000 00000000 00000000

$X_Q = 123 = 127 + (-4)$

$P_Q = -4$

$Q = -(1,01111000)_2 \cdot 2^{-4} = -(0,000101111)_2 = -(0,091796875)_{10}$