Лабораторная работа №3

| K | Система | X1 | X2 | Х3 | X4 | X5 |
|----|---------|-----|-----|----|------|----|
| 20 | 10-я | 286 | 293 | 16 | 4811 | 21 |
| | 16-я | 11E | 125 | 10 | 12CB | 15 |

$$Y = [(X1 + X2)X3 - X4]/X5$$

1 шаг: Сложение

АХ = записал 11Е

BX = 125

0100h = D801.

вычисление с помощью ввода 'Т'

Результат сложения: 243

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₽ ×
🗪 Командная строка - debug
Microsoft Windows XP [Версия 5.1.2600]
(С) Корпорация Майкрософт, 1985—2001.
C:\Documents and Settings\Администратор>debug
-R
AX=0000
                                            000 SP=FFEE
80C IP=0100
BP,CX
            BX =0000
ES =0B0C
                                    DX =0000
CS =0B0C
                         CX =0000
                                                               BP=0000 SI=0000
                         SS=0B0C
                                                                NU UP EI PL NZ NA PO NC
DS=0B0C
0B0C:0100 01CD
-R AX
AX 0000
                                 ADD
:11E
-R BX
BX 0000
:125
-E 100
0B0C:0100
               01.01
                          CD.D8
AX=011E BX=01
DS=0B0C ES=0B
0B0C:0100 01D8
            BX = 0125
ES = 0B0C
                         CX =0000
                                     DX =0000
                                                  SP=FFEE
IP=0100
                                                               BP=0000 SI=0000 DI=0000
                         SS=OBOC
                                     CS=OBOC I
                                                                NU UP EI PL NZ NA PO NC
                                 ADD
AX=0243
DS=0B0C
            BX = 0125
ES = 0B0C
                         CX =0000
                                     DX =0000
                                                  SP=FFEE
                                                               BP=0000
                                                                           SI =0000 DI =0000
                                     CS = OBOC
                                                  IP=0102
                         SS = OBOC
                                                                NU UP EI PL NZ AC PO NC
OBOC:0102 215F73
                                                                                              DS:0198=74C0
                                 AND
```

2 шаг: Умножение

IP = 100

AX = 0243

BX = 10

0100h = E3F7

Результат: 2430

```
IP
0102
:100
 -R
AX=0243 BX=01
DS=0B0C ES=0B
0B0C:0100 01D8
             BX =0125
ES =0B0C
                            CX =0000
                                        DX =0000
CS =0B0C
                                                       SP=FFEE
IP=0100
                                                                     BP=0000 SI=0000 DI=0000
                                                                       NU UP EI PL NZ AC PO NC
                            SS=0B0C
                                                 ÃX,BX
                                     ADD
-R BX
BX 0125
:10
-E 100
OBOC:0100 01.F7
                             D8.E3
-R
-R
AX=0243 BX=0010
DS=0B0C ES=0B0C
0B0C:0100 F7E3
                            CX =0000
                                                                      BP=0000 SI=0000 DI=0000
                                         DX =0000
                                                        SP=FFEE
                                        CS = OBOC
                            SS=0B0C
                                                        ĬP=0100
                                                                       NU UP EI PL NZ AC PO NC
                                     MUL
                                                                       P-0000 SI-0000 DI-000
NV UP EI PL NZ NA PE NC
DS:0083-2020
AX=2430 BX=0010
DS=0BOC ES=0BOC
0BOC:0102 215F73
                                                 000 SP=FFEE
0C IP=0102
[BX+73],BX
                            CX=0000 DX=0000
SS=0B0C CS=0B0C
                                                                      BP=0000 SI=0000 DI=0000
                                     AND
```

3 шаг: Вычитание

IP = 100

AX = 2430

BX = 12CB

0100h = D829

Результат: 1165

```
BX = 12CB
ES = 0B0C
                                                    SP=FFEE
IP=0100
AX=2430
                          CX =0000
                                       DX =0000
                                                                 BP=0000 SI=0000 DI=0000
                                     CS = OBOC
DS=0B0C
                          SS = OBOC
                                                                  NU UP EI PL NZ NA PE NC
OBOC:0100 29E3
-E 100
                                              BX,SP
                                  SUB
OBOC:0100
               29.29
                           E3.D8
-R
AX=2430
DS=0B0C
AX=2430 BX=12CB
DS=0BOC ES=0BOC
0BOC:0100 29D8
                                                    SP=FFEE
IP=0100
                          CX =0000
                                      DX =0000
                                                                 BP=0000 SI=0000 DI=0000
                          SS=OBOC
                                                                  NU UP EI PL NZ NA PE NC
                                      CS = OBOC
                                  SUB
                                              AX,BX
                                              000 SP=FFEE
80C IP=0102
[BX+73],BX
AX=1165
DS=0B0C
            BX =12CB
ES =0B0C
                         CX =0000
SS =0B0C
                                                                 BP=0000 SI=0000 DI=0000
NV UP EI PL NZ AC PE NC
                                      DX =0000
                                      CS = OBOC
                                                                                                 DS:133E=1F06
OBOC:0102 215F73
                                  AND
```

4 шаг: Деление

IP = 100

AX = 2430

BX = 15

0100h = F3F7

DX = 1 (остаток)

Результат: **D4**

```
-R IP
IP 0102
:100
-R BX
BX 12CB
:15
-E 100
0B0C:0100 29.F7 D8.F3
-R
AX=1165 BX=0015 CX=0000 DX=0000 SP=FFEE BP=0000 SI=0000 DI=0000
DS=0B0C ES=0B0C SS=0B0C CS=0B0C IP=0100 NV UP EI PL NZ AC PE NC
0B0C:0100 F7F3 DIV BX
-T

AX=00D4 BX=0015 CX=0000 DX=0001 SP=FFEE BP=0000 SI=0000 DI=0000
DS=0B0C ES=0B0C SS=0B0C CS=0B0C IP=0102 NV UP EI PL NZ AC PE NC
0B0C:0102 215F73 AND IBX+731,BX DS:0088=4220
```

Проверка:

$$286 + 293 = 579$$

$$579 * 16 = 9264$$

$$9264 - 4811 = 4453$$

$$\frac{4453}{21} = 212 \frac{1}{21}$$

$$212_{10} = D4_{16}$$

$$1_{10} = 11_{16}$$