Homework Program 09

Memory 4 | Program Counter Trace | Autos | Locals | main.asm*

```
.INCLUDE"m328Pdef.inc"
.DEF   var_al = r16
.DEF   var_ah = r17
.DEF   var_b  = r18
.DEF   var_cl = r19
.DEF   var_ch = r20
.DEF   var_d  = r21

.CSEG
.ORG   0x0000
       rjmp RESET

RESET:  ldi  var_b, 220
        ldi  var_d,15
        ldi  var_cl,low(500)
        ldi  var_ch,high(500)

        mul  var_b,var_d
        movw  var_al,r0

        add  var_al,var_cl
        adc  var_ah,var_ch

        ldi zl, low(a) ; z = 0x10c
        ldi zh, high(a)

        st z+,var_al
        st z+,var_ah
        st z+,var_b
END:  rjmp END

.dseg
.org 0x010c
a:    .byte 2
b:    .byte 1
```

Processor Status

Name	Value
Program Counter	0x0000000E
Stack Pointer	0x08FF
X Register	0x0000
Y Register	0x0000
Z Register	0x010F
Status Register	I T H S V N Z C
Cycle Counter	60
Frequency	1.000 MHz
Stop Watch	60.00 µs

Watch 1

Name	Value
var_al	0xd8
var_ah	0x0e
var_b	0xdc
var_cl	0xf4
var_ch	0x01
var_d	0x0f

Memory 3

Memory: data IRAM

```
data 0x0100  00 00 00 00 00 00 00 00 00 00 00 00 d8 0e dc 00  ........
data 0x0110  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0120  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0130  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0140  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0150  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0160  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0170  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0180  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0190  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x01A0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x01B0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x01C0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x01D0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x01E0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x01F0  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0200  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0210  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
data 0x0220  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  ........
```