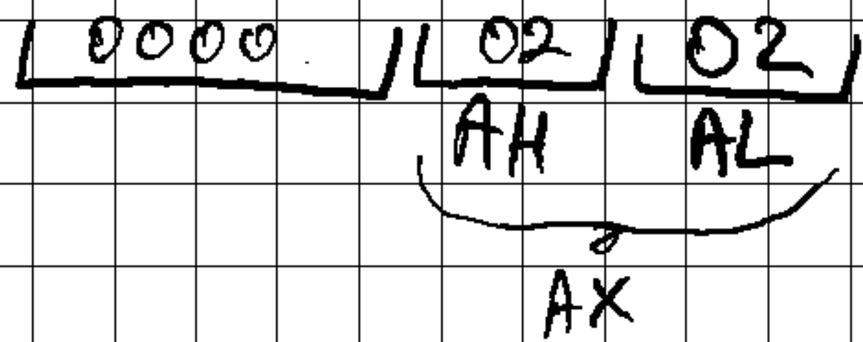
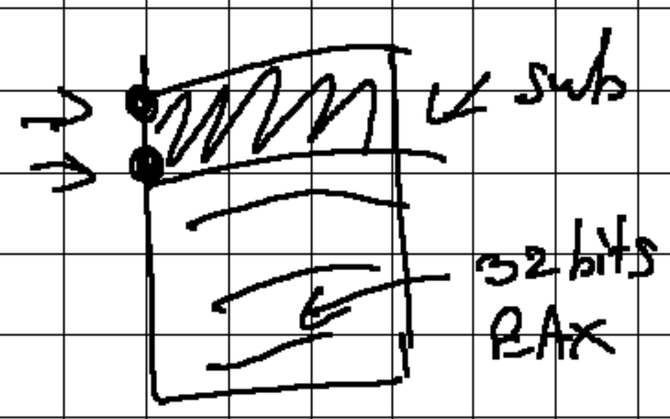
Registers:

EAX
EBX
ECX
EDX




```
mov al, 2
mov ax, 2
mov ah, 2
mov eax, 2
```

byte, word, dw, qw
↓ double word
↓ quad word



a = 121 → 1
b = 365 → 1
489
1

3 times passed through memory

321 → 1
663
984

Little E

a DW 11 22 33 44 55 66 77 88 h

a1 DW 11h

a2 BB 35 67 88 h

a3 DW -3h

in memory is: 78 56 11 00

88 67 35 00

FD FF

-3 = 00000011

11111100 +1

11111101

F D

a_1 DD 11223344h

a_2 DB 44h

a_3 DW 5566h

a_4 DB 77

mov al, 7

mov al, [a4]

mov ax, [a2]

mov eax, [a1]

$\overbrace{33221100}^{a_1}, \overbrace{44}^{a_2}, \overbrace{6655}^{a_3}, \overbrace{77}^{a_4}$

AL = 77

AX = 6644

EAX = 00112233

AL = 33

B + B ⇒ byte

W + W ⇒ word

W + b ⇒ / (they need to be the same)

mov ax, 63 ; ⇒ ax = 63

ADD ax, [a2] ⇒ +6344

ADD ax, word 5 ⇒ ax = 69

B * B ⇒ W

W * W ⇒ DW

DW * DW ⇒ QW

MUL op

byte ⇒ op · AL ⇒ AX

word ⇒ op · AX ⇒ ~~EAX~~ !

DX : AX

DW ⇒ op · EAX ⇒ EDY : EAX

DIV op

↳ byte ⇒ AX : op ⇒ AL & AH

word ⇒ (DX:AX) : op ⇒ AX - number

DX - remainder

↗ from Vonicon's site ⇒ lab 2 ⇒ ex

Ex: 25) 64 * 4

```
mov  AL, 64
mul  byte, 4
```

---

580 : 2

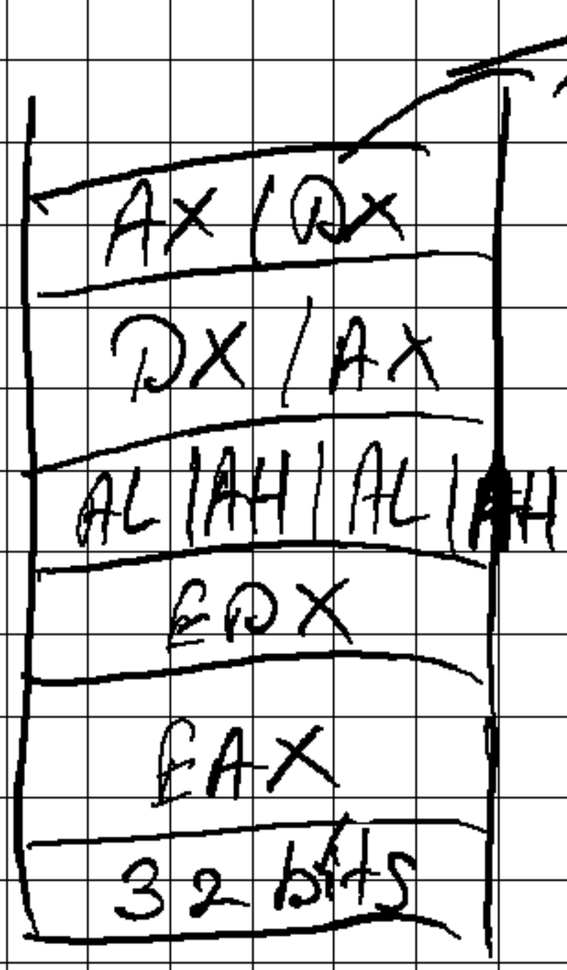
```
mov  BL, 2
mov  AX, 580
DIV  BL
```

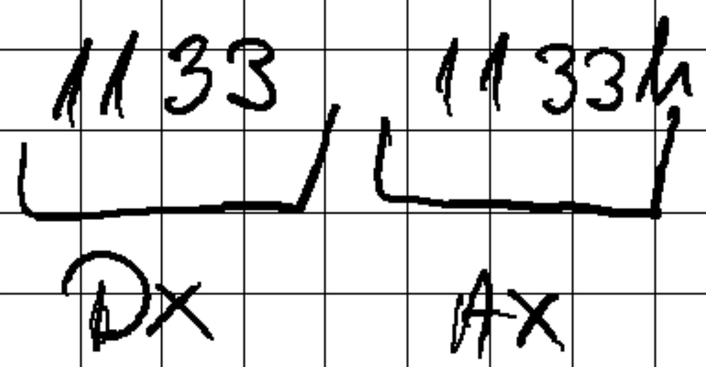
---

2 · (-1)

won't work with negative numbers, we'll have diff instructions for that

```
mov  AL, 2
mov  BL, -1
MUL  BL
```





Homework: From Lab 2:

For each set solve
the problem with your group
number + the one +15
if i'm no. 4.
4+15
i have to solve: 4, 19