Write the code partition of the following Q4:

```assembly
sar dst, 1
neg dst
das
sbb dst, src
add dst, src
cwd
cwd reg
cbw reg
movsx
```

**80x86 Instruction formats**

- I (Instruction) format
- A (Address) format

**I-Format**

- `op code`
- `operands`
- `flags`

**A-Format**

- `segment:offset`
- `operands`
- `flags`

**Assembler Directives**

- `.model` (selects the code size)
- `.data` (defines data)
- `.code` (defines code)
- `.section` (defines partitions of code)

**Example:**

```assembly
.model small
.stack 100h
.data
.org 00h
 замеча equ 1
.4byte 0Ah
```

**Q1.** Find the contents of AX register and status flags after execution of the following instructions:

- **mov dw src, offset dst**
- **add dst, src**
- **shr dst, cl**

**Solution:**

- AX = ...
- CF = ...
- ZF = ...
- SF = ...
- OF = ...

**Q2.** What shall be the values of SI register after the execution of the following instructions:

- **mov bl, [si]**
- **inc si**

**Solution:**

- SI = ...

**Q3.** Fill in the contents of data segment for the given data definition statements:

- **.data**
- **.nsw 1 dw 521**
- **.nba db 2 dup(3), '0A8h'**
- **.nsw 2 dw 12h, '255', 12**

**Q4.** You can multiply a number by 2 by adding it to itself.

- Write the code partition of the following assembly source to multiply an array of 10 bytes by 2. Array is at address 0123h in data segment. If array at arr is

  - **01h, 02h, 03h, 04h, ..., 0Ah** after execution it shall be
  - **02h, 04h, 06h, ..., 14h** (still at arr).

  You shall use a loop and indirect addressing modes in your code.