CSE 331.7
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ANS: 1

LEA means Load Effective Address.

The Algorithm for it is:

REG = Address of memory (offset)

EXAMPLE:

```
MOV BX, 35Li
MOV DI, 12h
LEA SI, [BX+DI]
```

Offset means an assembler directive in x86 Language. It actually means address and is a way of handling the overloading of the ~~mov~~ 'MOV' instruction

E.g.: MOV SI, offset variable

MOV SI, variable.

ANS: 4

There are 4 registers. BX, SI, DI, BP.

E.g.:

[BX + SI] [SI] [BX + SI + d8]

[BX + DI] [DI] [BX + DI + d8]

[BP + SI] d16 (variable offset only) [BP + SI + d8]

[BP + DI] [BX] [BP + DI + d8]

[SI + d8] [BX + SI + d16] [SI + d16]

[DI + d8] [BX + DI + d16] [DI + d16]

[BP + d8] [BP + SI + d16] [BP + d16]

[BX + d8] [BP + DI + d16] [BX + d16]

ANS: 3

In Assembly Language Programming there are different registers presenting for different purposes. So we have to assume DATA is the name given to DATA segment register and CODE is the name given to code segment register.

ANS: 2

DATA SEGMENT is the starting point of the data segment in a program and DATA is the name given to this segment and SEGMENT is the keyword for defining segments, where we can declare variables.

AND, .DATA means the data section which is used for declaring initialized data or constants. This data doesn't change in runtime. Various constant values, file names, or ~~buffer~~ size can be declared in this section.