

16.317: Microprocessor Systems Design I

Spring 2014

Lecture 8: Key Questions

February 10, 2014

1. Given the following initial state:

- AX = 1234H
- BL = ABH
- Memory location SUM = 00CDH

Show the results of each step of the following instruction sequence. Be sure to track the carry flag throughout the sequence:

```
ADD AX, [SUM]
ADC BL, 05H
NEG BL
SUB AX, 12H
INC WORD PTR [SUM]
```

2. Describe the operation of the MUL and IMUL operations.

3. Describe the operation of the DIV and IDIV operations.