Administrivia
Reminder: Homework 2 due today. Homework 3 (by request) due Wednesday.
(Some problems in Homework 2 seem ill-posed. "Corrections" added to write-up, but it's probably simplest to just answer them as asked, as if they made sense.)
(Questions?)
Quiz 3 next Monday.
Appendix B has some additional information about MIPS assembler language. Section B.10 in particular has short descriptions of all instructions and also a table (p. 50) that maps opcode to instruction name.

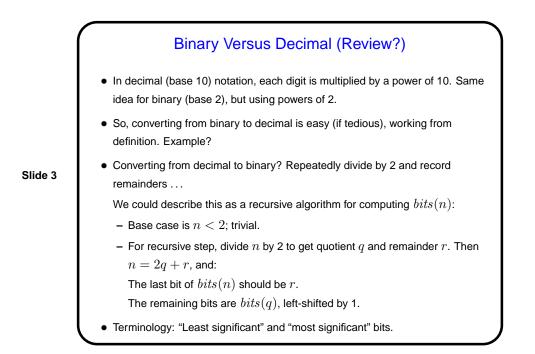
Representing Data, Revisited

- To the hardware "it's all ones and zeros". But those ones and zeros can encode numbers (various forms), text, etc.
- Numbers in particular are interesting because we want to implement arithmetic operations.

Slide 2

• In theory you learned about integer representation and arithmetic in CSCI 1320. Review ...

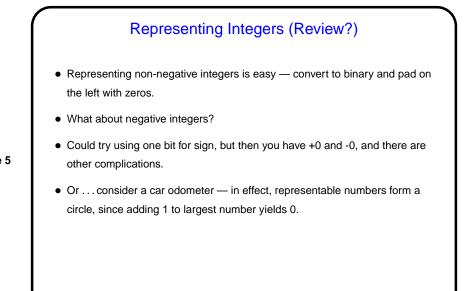
Slide 1

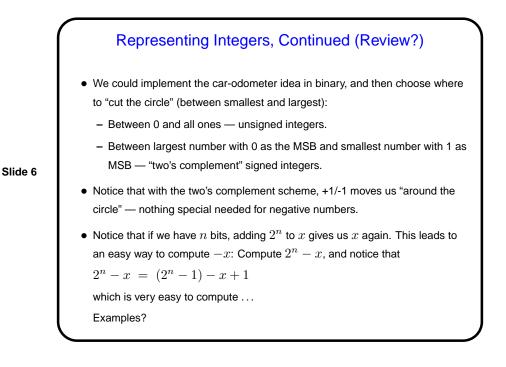


Binary Versus Hexadecimal (Review?)

- Binary is useful for showing real internal state but not very compact. Decimal is compact but not so easy to convert to/from binary.
- We might notice easy to convert to/from a base that's a power of 2. Hence the use of "octal" (base 8) and "hexadecimal" (base 16). For the latter, we need more than 10 digits, so we use "A" through "F".
 Examples?
- Notice that we can also convert directly to/from decimal, much as we did for binary.







Slide 5

