

Exercise 2B: Chapter 1 Data Storage

Complete the following Chapter Review Problems on pages 73–77.

#1 (what is the output for each?)

#5 (what is in memory at the end? Please note the textbook uses the word *move*, but the word *copy* should have used instead for steps 1 and 3.)

#8 (what is the most significant bit?)

#19 and #20 (ASCII in binary and hex. Please use the ASCII table at the back of your textbook.)

#26 (binary to base 10) – *divide them up and do 3 each*

#27 (base 10 to binary) – *work on these ones together*

[Custom question 1] What is the largest 8-bit integer? What is the largest 10-bit integer? Describe a quick way to calculate the maximum value for a given number of bits.

[Custom question 2] Perform each of the following 5-bit additions without converting to/from decimal. Identify each case in which the answer is incorrect because of overflow.

00101	11111	01111	10111	11111	00111
+ 01000	+ 00001	+ 00001	+ 11010	+ 11111	+ 01100
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