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Date: Wednesday, September 14, 2016

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**MATH 181 F1 Worksheet: Binary Codes**

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**Question 1:**

Use parity check sums  $a_1 + a_2 + a_3$ ,  $a_1 + a_3 + a_4$ , and  $a_2 + a_3 + a_4$  to calculate three check digits for 1100.

**Question 2:**

Use parity check sums  $a_1 + a_2 + a_3$ ,  $a_1 + a_3 + a_4$ , and  $a_2 + a_3 + a_4$  to calculate three check digits for 0100.

**Question 3:** Use Nearest-Neighbor Decoding to decode the word 001 if the code words are 010, 011, 001, and 110.