7/17/2016 HW 14: Binary codes (Section 7.2)-Benny Jones

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**Course:** Math 101 -Summer 2016-Sec. 953 (Choden)

**Assignment:** HW 14: Binary codes (Section 7.2)

1. Determine the parity check digit that should be appended so that the total number of I's is even for .

2.

The check digit should be

Determine the parity check digit that should be appended so that the total number of I's is even for .

3.

The check digit should be

Determine the parity check digit that should be appended so that the total number of I's is even for .

4.

The check digit should be

Determine the parity check digit that should be appended so that the total number of I's is even for .

5.

The check digit should be

Determine the Hamming distance between and

c = 0111

6.

The Hamming distance is

Determine the Hamming distance between and

c = 01101

7.

The Hamming distance is

Determine the Hamming distance between and

c = 101000

8.

The Hamming distance is

Determine the Hamming distance between and

c = 01100010

9.

The Hamming distance is

Add the given codewords using addition over in each place for and .

10.

The result is .

Add the given codewords using addition over in each place for and .

11.

The result is .

Add the given codewords using addition over in each place for and .

12.

The result is .

Suppose that a linear code has codewords { , , , , , , , }. Determine

the maximum number of errors that can be detected.

For this linear code, at most error(s) can be detected.

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