

Magma Homework Due Tuesday, Oct 3

1. Define the BCH code of length 15 and designed distance 5 over $\text{GF}(2)$. (Find out how to do that from Magma help/manual).
2. Find its parameters and a generator matrix.
3. Encode the message $(1,1,0,0,1,0,0)$. Call the encoded message v .
4. Introduce 2 errors at positions 4 and 13 of v . Call this vector in error w .
5. Decode w using syndromes.
6. Recover the original message (before encoding).

You should write an input file containing your Magma commands and write the output to another file. Submit hard copies of both files.