# Digital Communication - Summative Assessment

## Lempel-Ziv Compression

**Running time of the encoder**

Explain about the bits thing. i.e. each window has a number of bits it can occupy, so it increases in multiples of 2

(from the graph say that’s how i worked out best window size and lookahead for other files) (also mention how it’s pointless having the buffer larger than the window size)

**Different Window Sizes**

**Different file sizes:** For consistent window sizes, show different file sizes

**Different input type**: For consistent window sizes, show different file sizes (compare with previous)

**Minimum & maximum run time:** For a file of the same size, show best and worst input

**Average:** Look at running time for file of same size but different data

**Running time of the decoder**

**Graph**

Vary the window sizes on file of 1000 bytes

For consistent window sizes, show different file size times

**Compression ratio**

**Tables**

Show compression ratio at constant window size for different sized files

Show compression ratio at varying window sizes for same file

Discuss how compression is much better is data is near repeated (or identical)

**Comparison with other techniques**