

## CM30173/50210: Example sheet 1

27th January

Below are four ciphertexts, I have given the cipher used in each case. You should determine the key and plaintext using whatever methods and resources you like. The plaintexts contain only lower case letters with no punctuation or spaces.

Record any resources that were helpful, which methods of attack you used and why you think they were or were not successful.

### 1. Shift cipher:

WKHPDJLFZRUGVDUHVVTXHDPLVKRVVLIUDJH

### 2. Permutation cipher:

EMRMESEBREITCRUACYSINIHIANLTOSSEYSAEACRUEWSHTESEKANKTIL

### 3. Substitution cipher:

AGBAPZTGELGPTIPMGHQCGAECHZFVCEXXGLYIGHEULTQATQHPUFEUYGZZEVGUYHGUYIPUY  
IGQUGYIPYEAYIGFNKTTYCEGLYIGFSQKZLEUMGUYPSEXIGCYIPYUQQUGSQKZLDCGPO

### 4. Vigenère cipher:

EFKENHKTOBWSBWCZEDZTWEWZPNBRIPQRUNWGCXNLKCAQACDICRHTLLETWMAHTXWFQPAH  
SFQDNJMSIFMEBXVTOBXXECEVMCAXWUWPTMUEEYMCXYSTHTXHAMUCDWYKXJWZZCGKHFABU  
MXCQWTLMSFSRTHWITOTZSVTGMXGHNTWKBMVUFITOWYWLWUSCJYGGGAUGHZGGMCXVSWBFT  
LFSXSEBOLXDSODHLMFSDTXNRVWXIBXGWFDTMWMKHGPNBSPWEJHWITGFDIWYPZUZYVLGGE  
EFTCGFERLRTVCSGUILGFEBOLXCZEDWHRUWPTLTPNHTTQTCUOZPXOITGMGSFMIVFILRXQU  
MXHUCDFQPEBRIHTTLNPGGAGPBSNOFXHZIZDQRNTXKXCZXHIUWFBUMXGFUUMAIOSMHOKIU  
VALFHRIWMBWHQRIFXHZHQSEXNFEVHQGCYLGFDPHWSOBGBVXVKGZIIGI

All of the above are quotations, I will tell you where they come from in the problem class as to do so here would give far too much help!