

5 Numbers can be represented in denary, binary or hexadecimal.

(a) (i) Convert the binary number 01101001 to denary, showing your working.

.....
.....
.....
..... [2]

(ii) Convert the denary number 154 to binary.

.....
.....
.....
..... [2]

(b) The security code for an alarm system is a long binary number which begins

10001111100101111011 ...

The technicians prefer to use hexadecimal to enter the security code.

(i) When the number is converted into hexadecimal, the first two digits are 8F as shown below.

Complete the gaps to show the next three digits.

Binary:	1000	1111	1001	0111	1011
Hexadecimal:	8	F

[3]

(ii) Explain why the technicians prefer to use hexadecimal.

.....
.....
.....
..... [2]