

Binary and Hexadecimal numbers

1. Convert the following hexadecimal numbers to binary

- a) 32_{16} b) 19_{16} c) $2A_{16}$ d) $F3_{16}$ e) 823_{16} f) $20C_{16}$

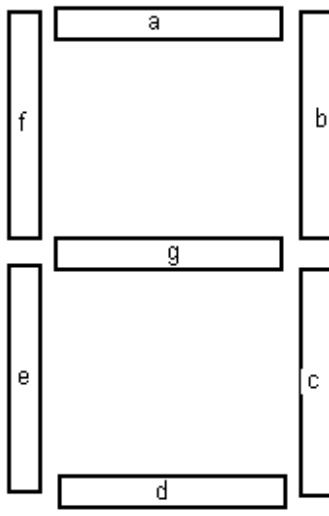
2. Convert the following binary numbers to hexadecimal

- a) 10001010_2 b) 11001011_2 c) 00110101_2 d) 11101_2
 e) 1011010011_2 f) 1000101001010_2 g) 1001010010111_2

3. The lights come on when the output is high. What hexadecimal number would you use to make the red light, amber light and the red man LEDs light?

D ₇	Red light
D ₆	Amber light
D ₅	Green Light
D ₄	
D ₃	Beeper
D ₂	Wait sign
D ₁	Red man
D ₀	Green man

4. The segment lights when the input is high. What hexadecimal number do you send to make the output show



D ₇	Decimal point
D ₆	Segment g
D ₅	Segment f
D ₄	Segment e
D ₃	Segment d
D ₂	Segment c
D ₁	Segment b
D ₀	Segment a

- a) 5
 b) 7
 c) 3
 d) What will the output show if you send the hexadecimal number 79_{16}