

Q3) Convert hexadecimal [0x7b4f] to decimal and Binary ✓

a)

$$\begin{aligned} 7 &= 7 \cdot 16^3 = 28,672 \\ B &= 11 \cdot 16^2 = 2816 \\ 4 &= 4 \cdot 16^1 = 64 \\ f &= 15 \cdot 16^0 = 15 \end{aligned}$$

31567 decimal #

B) hex to Binary [0x7b4f]

$$\begin{aligned} 7 &= 0111 \\ B &= 1011 \\ 4 &= 0100 \\ f &= 1111 \end{aligned}$$

0111 1011 0100 1111

Binary #

4 3 2 1

(half word) 16 Bits

Section 2

inter Pref as signed integers

Q4) Convert decimal [132] to Binary and hexadecimal ✓

a)

	Q	R
132/2	66	0
66/2	33	0
33/2	16	1
16/2	8	0
8/2	4	0
4/2	2	0
2/2	1	0
1/2	0	1

0 0 0 0 0 0 0 0

1 0 0 0 0 1 0 0

Binary

sign extension 16 Bit (half word)

B) to hexadecimal [132]

$$\begin{aligned} 132/16 &= 8 \text{ } 4 & 25 \cdot 16 &= [4] \\ 8/16 &= 0 \text{ } 8 \end{aligned}$$

0x 8 4 hexadecimal

Q5)

a) Convert decimal [-463] into Binary and hexadecimal ✓

make it Positive successive divide by 2 then apply 2's complement.