

Homework #3

Due: 9/30

Fill in the empty boxes and return this sheet. Show your work by attaching your worksheets.

1. [40 points]

row	X	Y	a	b	c	d
!	0x0D34	0x0A1F				
2	0xBA1D	0x3647				

Assuming that X and Y are 16-bit hexadecimal values,

a $X + Y$, in hexadecimal

b $X - Y$, using 2's complement arithmetic, in hexadecimal

c the value of X, assuming an unsigned representation, in decimal

d the value of X, assuming a two's complement representation, in decimal

2. [60 points]

row	word	a	b	c	d
1	0x24A60004				
2	0xAFBF0000				

a the decimal value, assuming a 2's-complement representation

b the decimal value, assuming an unsigned representation

c the corresponding MIPS instruction. Use the register names, not their numbers (i.e. "\$ra", not "\$31").

d the approximate IEEE 754 single-precision floating point value, expressed in (decimal) scientific notation with at least 4 significant digits