2: What is the decimal representation of each of the following unsigned binary integers?

a) 00110101 = (53)10

3: What is the sum of each pair of binary integers?

1. 1010 1111 + 1101 1011 = 1 1000 1010 = (394)10

4: Calculate binary 00001101 minus 00000111

0000 1101 - 0000 0111 = 0000 0110 = (6)10

5: How many bits are used by each of the following data types?

a) Word: 16

b) Doubleword 32

c) Quadword 64

d) Double quadword 128

7: What is the hexadecimal representation of each of the following binary numbers?

a) 0011 0101 1101 1010 = (35DA)16

15: What is the decimal representation of each of the following signed binary numbers?

a) (1011 0101)2c = -(0100 1011)2 = -(11+64)10 = ( -75)10  
Question 8:

Java Code:

class Test {

public static void main(final String[] args) {

int Y;

Y = 0;

int X = (Y + 4) \* 3;

}

}

Disassembled Code:

Compiled from "Test.java"

class Test {

Test();

Code:

0: aload\_0

1: invokespecial #1 // Method java/lang/Object."<init>":()V

4: return

public static void main(java.lang.String[]);

Code:

0: iconst\_0 //Sets 0 on the table

1: istore\_1 //Stores the table in register 1

2: iload\_1 //Loads register 1 onto the table

3: iconst\_4 //sets 4 on the table

4: iadd //Adds the two things on the table

5: iconst\_3 //Sets 3 on the table

6: imul //Multiplies the two things on the table

7: istore\_2 //Stores the result in register 2

8: return //Exits the function

}