## **Bitwise Operations Test - Answers**

```
a = ?
                                                       a = ?
int orig = 0x8080;
                                                       int orig = 0x6060;
int insert = 0x0001;
                                                       int insert = 0x0001;
int a = orig \land (insert << 8);
                                                       int a = orig \mid (insert << 12);
a = 0x8180
                                                       a = 0x7060
XOR = ?
                                                       AND = ?
int orig = 0xB0B0;
                                                       int oriq = 0xD0D0;
int insert = 0x000C;
                                                       int insert = 0x0001;
int a = orig \mid (insert << 12)
                                                       int a = orig \mid (insert << 12)
int b = orig \mid (insert << 4)
                                                       int b = orig \mid (insert << 8)
int XOR = a \wedge b;
                                                       int AND = a \& b;
result = ?
                                                       result = ?
long value1 = 0xF00F8008;
                                                       long value1 = 0x1001F00F;
long value 2 = 0xFF008800;
                                                       long value 2 = 0x1010F0F0;
int result = (value1 << 8) \land (value2 >> 4);
                                                       int result = (value1 << 8) \land (value2 >> 4);
result = ?
                                                       result = ?
long value 1 = 690;
                                                       long value 1 = 952;
                                                       long value2 = 283;
long value2 = 205;
int result = (value1 << 12) \land (value2 >> 4);
                                                       int result = (value1 << 4) ^ (value2 >> 8);
left = ?
                                                       a = ?
                                                       long testValue = 0x66009900;
int i = 0x4040;
int left = i \& (1 << 12);
                                                       int a = 0;
                                                       if (testValue & (1 << 8))
                                                       a = 1;
                                                       else
                                                       a = 2;
```

```
a = ?
                                                    a = ?, result = ?
long testValue = 0xD00D9009;
                                                    long testValue = 0xA00A4004;
int a = 0;
                                                    int a = 0;
if (testValue & testValue ^ (1 << 12))
                                                    if ((result = testValue & testValue | testValue
                                                    ^ (1 << 8)))
a = 1;
                                                    a = 1;
}
else
                                                    else
a = 2;
                                                    a = 2;
```