**Problem 1:  
What decimal number does the bit pattern 0×0C000000 represent if it is a floating-point number? Use the IEEE 754 standard.**

Single Precision: Sign(1 bit) | Exponent(8 bits) | Fraction(23 bits)  
Binary: 0 00011000 0000 0000 0000 0000 0000 000  
Sign: 0 (positive number)  
Exponent: 24-127 = -103 = 1.0×2-103  
Fraction: 0  
**Decimal: 9.8607613e-32**

**Problem 2:  
Write down the binary representation of the decimal number 63.25 assuming the IEEE 754 single precision format.**

Single Precision: Sign(1 bit) | Exponent(8 bits) | Fraction(23 bits)  
Converted to Binary: 111111.01  
Integral: 63 = 111111  
Fraction: .25 = .01  
Normalized: 1.1111101 × 25  
Exponent: 5 + 127 = 132 = 10000100  
Sign: 0 Positive  
**Binary: 0 10000100 1111 1010 0000 0000 0000 000**

**Problem 3:  
Write down the binary representation of the decimal number 63.25 assuming the IEEE 754 double precision format.**

Double Precision: Sign(1 bit) | Exponent(11 bits) | Fraction(52 bits)  
Converted to Binary: 111111.01  
Integral: 63 = 111111  
Fraction: .25 = .01  
Normalized: 1.1111101 × 25  
Exponent: 5 + 1023 = 1028 = 10000000100  
Sign: 0 Positive  
**Binary: 0 10000000100 1111 1010 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000 0000**