

Solutions for Homework 1

1. The binary equivalents are: 11111000000, 111110100000, and 10000000000000, respectively.

2. In decimal it is 617, in octal it is 1151, and in hex it is 269.

7. The results are: 10011100, 11111110, 00000001, and 00000000. The first calculation results in an overflow. The subtractions are done by forming the two's complement of the subtrahend and then adding it to the minuend.

8. The results are: 10011100, 11111111, 00000000, and 11111111. Again the first calculation gives an overflow. The subtraction is done by forming the one's complement of the subtrahend and adding it to the minuend.

9. The five sums are: 001, 111, 101, 011, and 000, respectively. The last two cause an overflow (the result has the opposite sign.)