

**ICT Arithmetic Circuits HW**

Write the 1's Complement of the following:

1) 1011 = \_\_\_\_\_    2) 0011 = \_\_\_\_\_    3) 0101 = \_\_\_\_\_    4) 1101 = \_\_\_\_\_

Convert the following 1's Complement numbers to decimal:

5) 1111 = \_\_\_\_\_    6) 0101 = \_\_\_\_\_    7) 1011 = \_\_\_\_\_    8) 0110 = \_\_\_\_\_

Convert the following decimal number to 2's Complement

9) 3 = \_\_\_\_\_    10) -5 = \_\_\_\_\_    11) -7 = \_\_\_\_\_    12) 5 = \_\_\_\_\_

Convert the following 2's Complement numbers to decimal:

13) 0101 = \_\_\_\_\_    14) 1011 = \_\_\_\_\_    15) 1101 = \_\_\_\_\_    16) 0011 = \_\_\_\_\_

17) 1111 = \_\_\_\_\_    18) 0000 = \_\_\_\_\_    19) 1000 = \_\_\_\_\_    20) 1001 = \_\_\_\_\_

Find the product of each of the following binary numbers:

21) 
$$\begin{array}{r} 1011 \\ * 101 \\ \hline \end{array}$$
      22) 
$$\begin{array}{r} 11011 \\ * 111 \\ \hline \end{array}$$
      23) 
$$\begin{array}{r} 1101 \\ * 11 \\ \hline \end{array}$$
      24)  $10101_2 * 2_{10}$