## ececticicilililili

- 4) Perform the following additions
  - a. (2267)a + (1777)a
  - b. (2267)9 + (1777)9
  - c. (2267)16 + (1777)16

## \* SOLUTION &

- 5) Perform the following subtractions
  - a. (2267)<sub>8</sub> (1777)<sub>8</sub>
  - b. (2267)<sub>9</sub> (1777)<sub>9</sub>
  - c. (2267)<sub>16</sub> (1777)<sub>16</sub>

## \*Solution8

$$(2267)_{8}$$
  
 $(1777)_{8}$ 



c) 
$$((A + B + C) - C) = (A + B + C) - C$$
  
=  $(A + B + C) - C + C$   
=  $(A + B + C) - C + C$   
=  $(A + B + C) - C + C$   
=  $(A + B + C) - C$   
=  $(A + B + C) -$ 

10) Simplify the following Boolean expressions to a minimum number of literals:

b. 
$$x'yz + xz$$

c. 
$$xy + xy'$$

d. 
$$(x + y)(x + y')$$

e. 
$$xyz + x'y + xyz'$$

\* Solutions

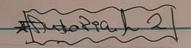
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c) xy+xy = x.(y+y) = x.1 = [x]

= x + xy + xy = x - (1 + y + y) = [x]

e)  $\chi Y = + \chi Y + \chi Y =$ =  $\chi Y (Z + Z) + \chi Y$ =  $\chi Y + \chi Y = (\chi + \chi) + \chi$ =  $\chi Y = -\chi Y + \chi Y + \chi Y = -\chi Y + \chi Y + \chi Y = -\chi Y + \chi Y + \chi Y = -\chi Y + \chi Y + \chi Y = -\chi Y + \chi Y + \chi Y = -\chi Y +$ 





1) Determine the value of the base x if,  $(410)_x = (226)_8$ .

- 2) Perform the following addition without converting to decimal
  - a.  $(110110)_2 + (110101)_2$
  - b. (15F)<sub>16.+</sub> (A7)<sub>16</sub>
  - c. (35)<sub>8</sub> + (73)<sub>8</sub>

$$\begin{array}{c} (1001010) \\ (100100) \\ ($$

- 3) Perform the following multiplication
  - a. (367)<sub>8</sub> \* (20)<sub>8</sub>
  - b. (b73)<sub>16</sub> \* (15)<sub>16</sub>

## 10 octuloz \*

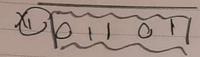
$$\frac{2)}{*} \frac{(3 \ 6 \ 7)_{8}}{2 \ 0}$$

$$\frac{75 \ 6}{(75 \ 60)_{0}}$$

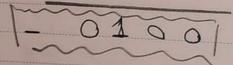


- 7) Perform the subtraction of the following unsigned binary numbers using 2's complement
  - a. 11010-1101
  - b. 1011-1111
  - c. 10011 10010
  - d. 100010 100110

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- b) 1 0 1 1 - 1 1 1 1
  - 1011
  - 31100

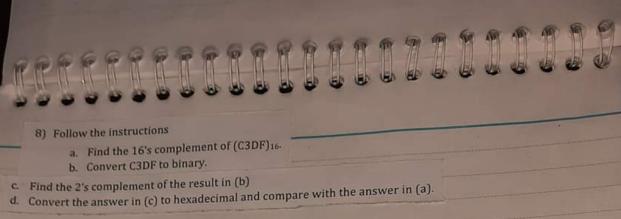


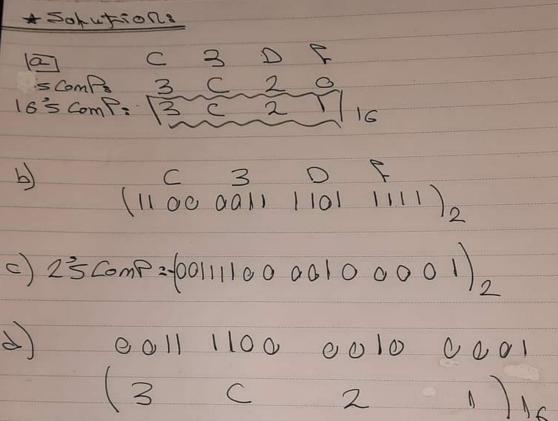
1'0'0' 1 1

+ 011010

0111100

-000100





b. 
$$X'Y + XZ'$$

d. 
$$((A B' + C). D' + E)'$$

\* Sohutions.