

# WORKSHEET 1

## 1. Convert the following:

a)  $37_{10}$  to  (base 2)

2 | 37  
2 |  →   
2 | 9 → 0  
2 |  →   
2 | 2 →   
1 →

b)  $479_{10}$  to  (base 8)

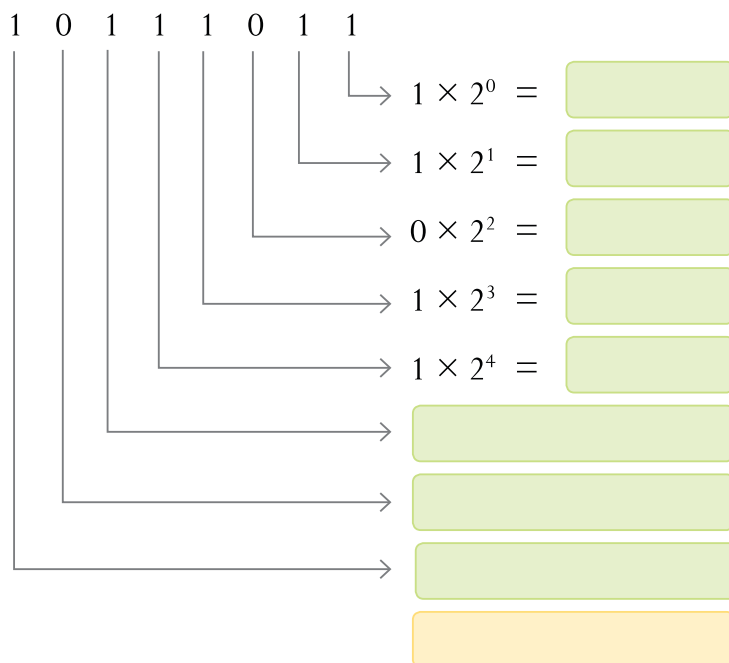
8 | 479  
8 | 59 →   
 →

c)  $2764_{10}$  to  (base 16)

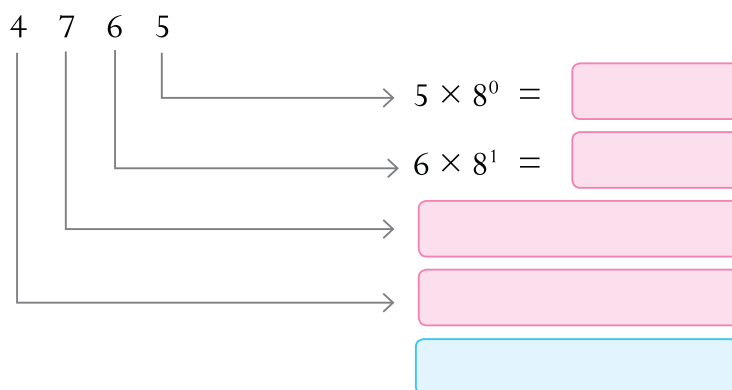
16 | 2764  
16 |  →   
A →

## 2. Convert the following:

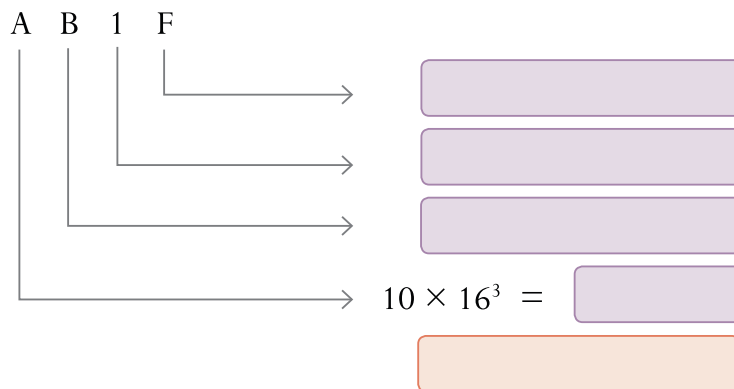
a)  $10111011_2$  to  (base 10)



b)  $4765_8$  to  (base 10)



c) AB1F<sub>16</sub> to  (base 10)



### 3. Convert the following:

a) 10110111101<sub>2</sub> to  (base 8)

4	2	1	Octal
0	1	0	2
1	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	7
<input type="text"/>	0	<input type="text"/>	<input type="text"/>

b) 1011111010010<sub>2</sub> to  (base 16)

8	4	2	1	hexadecimal
<input type="text"/>	<input type="text"/>	<input type="text"/>	1	1
<input type="text"/>	<input type="text"/>	<input type="text"/>	1	7
1	1	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	1	0	<input type="text"/>

**4. Add:**

a)  $1010110_2$   
+  $111011_2$

b)  $4576_8$   
+  $2735_8$

c)  $AF59_{16}$   
+  $27A_{16}$

**5. Subtract:**

a)  $1001011_2$   
-  $110100_2$

b)  $7205_8$   
-  $3456_8$

c)  $FA76_{16}$   
-  $2FF_{16}$

**6. a) Divide  $101011010_2$  by  $1011_2$**

$$\begin{array}{r} 1011 \overline{) 101011010} \end{array}$$

**b) Multiply  $10101101_2$  with  $11011_2$**

$10101101_2$   
-  $11011_2$