

WORKSHEET 1

1. Convert the following:

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

$$\begin{array}{r} 2 \overline{) 37} \\ 2 \overline{) \rightarrow } \\ 2 \overline{) 9} \rightarrow 0 \\ 2 \overline{) 2} \rightarrow \\ 1 \rightarrow \end{array}$$

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

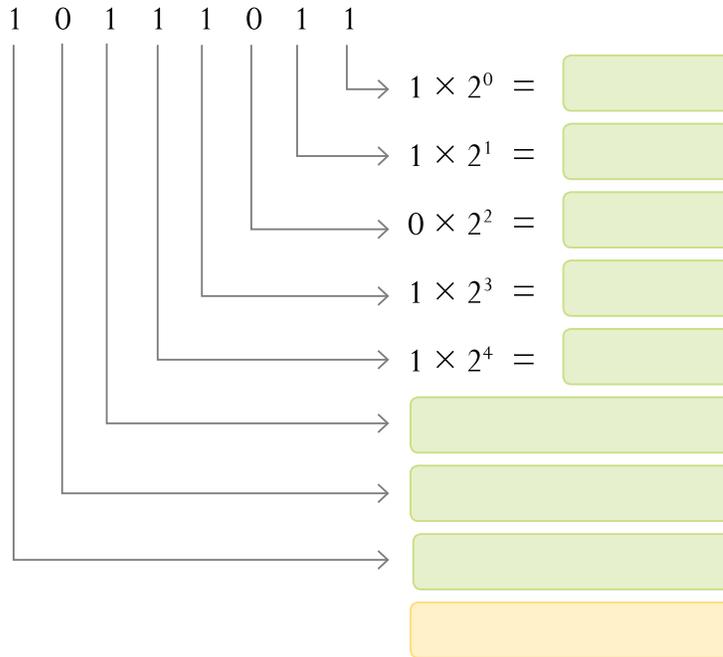
$$\begin{array}{r} 8 \overline{) 479} \\ 8 \overline{) 59} \rightarrow \\ \overline{) } \rightarrow \end{array}$$

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

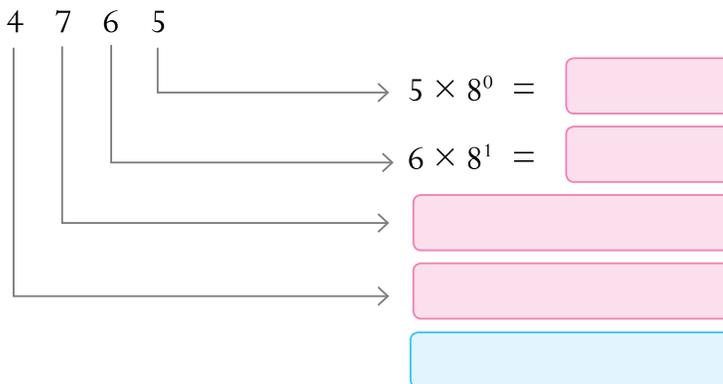
$$\begin{array}{r} 16 \overline{) 2764} \\ 16 \overline{) } \rightarrow \\ \overline{) A} \rightarrow \end{array}$$

2. Convert the following:

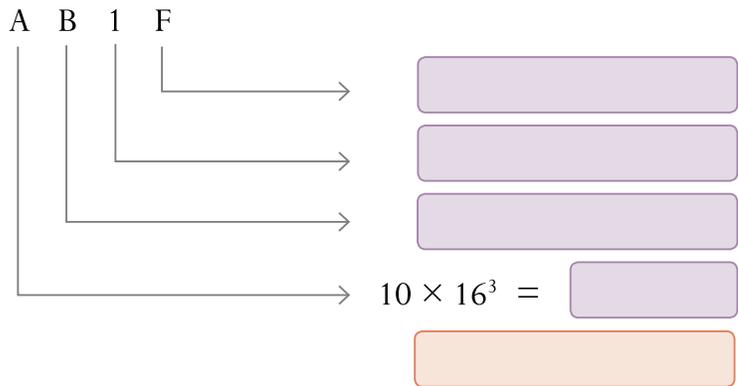
a) 10111011_2 to (base 10)



b) 4765_8 to (base 10)



c) $AB1F_{16}$ to (base 10)



3. Convert the following:

a) 10110111101_2 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_2 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