Subtraction (Decomposition method) – Sheet 1

FIRST LEVEL :

If your child is learning about:
Decomposition

It is important that you are familiar with the words and methods your child's teacher will be using in the classroom. One important change possibly from your school days is that the term "**EXCHANGE**" is used instead of "borrow" and "pay back".

Example

Step 1
Begin at the units column. Now say 3 take away 7. I cannot.
(3 is less than 7 , therefore I cannot subtract)

$$\begin{array}{cc} \mathbf{T} & \mathbf{U} \\ 6 & 3 \\ -\ 2 & 7 \\ \hline \end{array}$$

Step 2
Because you do not have enough units, go to the tens column.
You have 6 tens here. You must EXCHANGE one of the six
 tens for ten units. Do this by scoring out the 6 and writing a small 5.
Put the figure 1 (representing one ten – 10 units) in front of the 3 units.
You therefore now have 13 units.

$$\begin{array}{cc} \mathbf{T} & \mathbf{U} \\ {}^{5}\cancel{6} & {}^{1}3 \\ -\ 2 & 7 \\ \hline \end{array}$$

You may find it helpful to visualise the exchanging process.

Exchange one ten for 10 units
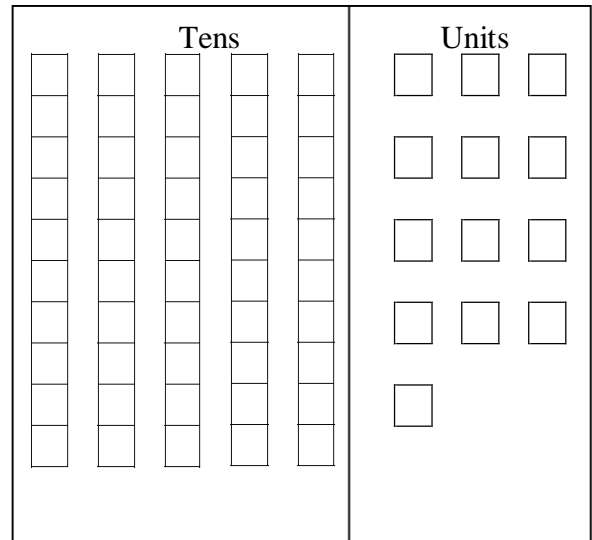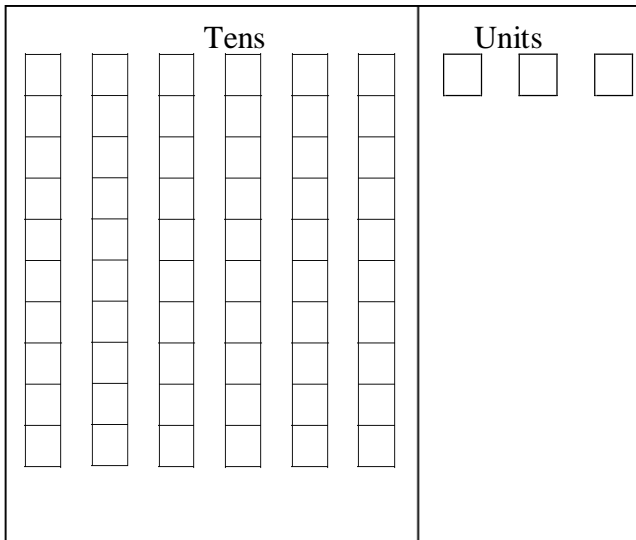
Step 3
Now you have 13 units and you can take 7 units away. This leaves 6. Put a figure 6 in the units column. Now move to the tens column and subtract the tens. Thus, 5 tens take away 2 tens is 3 tens. Place a figure 3 in the tens column. Answer 36.

$$\begin{array}{cc} \mathbf{T} & \mathbf{U} \\ {}^{5}\cancel{6} & {}^{1}3 \\ -\ 2 & 7 \\ \hline 3 & 6 \end{array}$$

Subtraction (Decomposition method) – Sheet 2

SECOND LEVEL

When you child has mastered the above sums, he/she will move on to examples involving Hundreds. The process will be exactly the same.

Subtraction involving hundreds, tens and units

Example 1

Step 1
Begin at the units column. Now say 2 units take away 8 units. I cannot.
(2 is less than 8 , therefore I cannot subtract)

$$
\begin{array}{c c c}
H & T & U \\
3 & 5 & 2 \\
-\ 1 & 6 & 8 \\
\hline
\end{array}
$$

Step 2
Because you do not have enough units, go to the tens column.
You have 5 tens here. You must EXCHANGE one of the five
tens for ten units. Do this by scoring out the 5 and writing a small 4.
Put the figure 1 (representing one ten – 10 units) in front of the 2 units.
12 take away 8 is 4. Put a figure 4 in the units column.

$$
\begin{array}{c c c}
H & T & U \\
3 & {}^{4}\!\!\not5 & {}^{1}2 \\
-\ 1 & 6 & 8 \\
\hline
 & & 4 \\
\end{array}
$$

Step 3
Go to the tens column. 4 tens take away 6 tens. I cannot do this.
Go to the hundreds column. You have 3 hundreds here.
EXCHANGE 1 hundred for 10 tens. Do this by scoring out the 3 and
writing a small 2. Put the figure 1 in front of the 4 tens. 14 take away 6 is
8. Write the figure 8 in the tens column.

$$
\begin{array}{c c c}
H & T & U \\
{}^{2}\!\!\not3 & {}^{14}\!\!\not5 & {}^{1}2 \\
-\ 1 & 6 & 8 \\
\hline
 & 8 & 4 \\
\end{array}
$$

Step 4
Go to the hundreds column. 2 hundreds take away 1 hundreds equals
1 hundreds. Write a 1 in the hundreds column. The answer is 184.

$$
\begin{array}{c c c}
H & T & U \\
{}^{2}\!\!\not3 & {}^{14}\!\!\not5 & {}^{1}2 \\
-\ 1 & 6 & 8 \\
\hline
1 & 8 & 4 \\
\end{array}
$$

Example 2

Step 1
Begin at the units column. Now say 2 units take away 8 units. I cannot.
(2 is less than 8, therefore I cannot subtract)

$$
\begin{array}{c c c}
H & T & U \\
5 & 0 & 2 \\
-\ 1 & 6 & 8 \\
\hline
\end{array}
$$

Step 2
Because you do not have enough units, go to the tens column. There are no
tens, so you cannot exchange. You must go to the hundreds column. You
have 5 hundreds here. You must EXCHANGE one of the five
hundreds for 10 tens. Do this by scoring out the 5 and writing a small 4.
Put the figure 1 (representing 10 tens) in front of the 0 tens.

$$
\begin{array}{c c c}
H & T & U \\
{}^{4}\!\!\not5 & {}^{1}0 & 2 \\
-\ 1 & 6 & 8 \\
\hline
\end{array}
$$

Subtraction (Decomposition method) – Sheet 3

Step 3
You now have 10 tens in the tens column, so you can exchange one of these tens for 10 units. Do this by scoring out the 10 and writing the figure 9 in the tens column. Put the figure 1 (representing one ten – 10 units) in front of the 2 units. 12 take away 8 is 4. Put a figure 4 in the units column.

H	T	U
^{4}5̶	^{9}1̶0̶	^{1}2
- 1	6	8
3	3	4

Step 4
Go to the tens column. 9 take away 6 is 3. Write 3 in the tens column.

H	T	U
^{4}5̶	^{9}1̶0̶	^{1}2
- 1	6	8
	3	4

Step 5
Go to the hundreds column. 4 hundreds take away 1 hundreds is 3 hundreds. Put the figure 3 in the hundreds column. The answer is 334.

H	T	U
^{4}5̶	^{9}1̶0̶	^{1}2
- 1	6	8
3	3	4