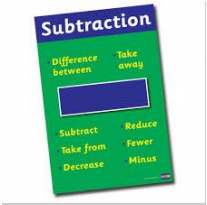
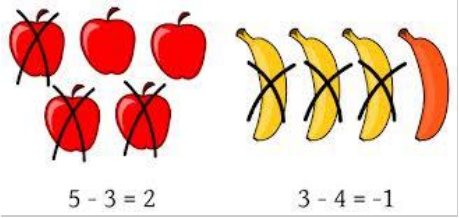
The Linden Academy

Maths Information

Booklet 2

Subtraction



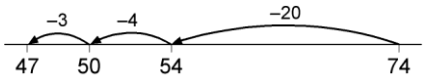


Stage 1

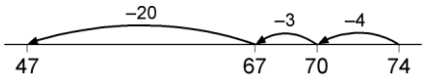
Steps in subtraction can be recorded on a number line.
The steps often bridge through a multiple of 10.

15 – 7 = 8

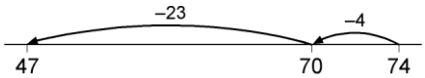
74 – 27 = 47 worked by counting back:



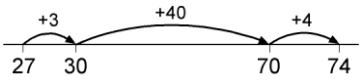
The steps may be recorded in a different order:



or combined:

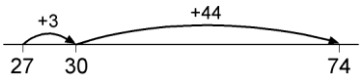


The counting-up method
With two - digit numbers



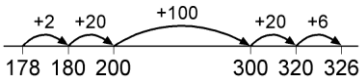
$$
\begin{array}{rll}
74 & & \\
-\ \underline{27} & & \\
3 & \rightarrow 30 & \\
40 & \rightarrow 70 & \\
\underline{4} & \rightarrow 74 & \\
47 & &
\end{array}
$$

or:



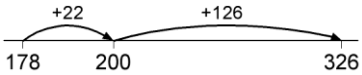
$$
\begin{array}{rll}
74 & & \\
-\ \underline{27} & & \\
3 & \rightarrow 30 & \\
\underline{44} & \rightarrow 74 & \\
47 & &
\end{array}
$$

The counting-up method
With three - digit numbers



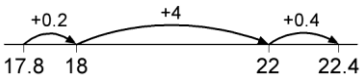
326
−178
2 → 180
20 → 200
100 → 300
26 → 326
148

or:



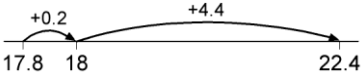
326
−178
22 → 200
126 → 326
148

The counting-up method with decimal numbers



22.4
−17.8
0.2 → 18
4.0 → 22
0.4 → 22.4
4.6

or:



22.4
−17.8
0.2 → 18
4.4 → 22.4
4.6

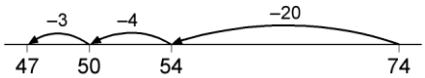
Stage 2

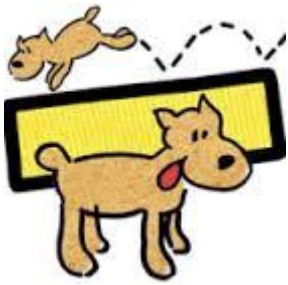
Subtraction can be recorded using partitioning:

74 – 27 = 74 – 20 – 7 = 54 – 7 = 47

74 – 27 = 70 + 4 – 20 – 7 = 60 + 14 – 20 – 7 = 40 + 7

This requires children to subtract a single-digit number or a multiple of 10 from a two-digit number mentally. The method of recording links to counting back on the number line.





Stage 3

Partitioned numbers are then written under one another:

Example: 74 – 27

Expanded method	**leading to**	
$70 + 4$	$\overset{60}{\cancel{70}} + \overset{14}{\cancel{4}}$	$\overset{6}{\cancel{7}}\ \overset{14}{\cancel{4}}$
$-\ 20 + 7$	$-\ 20 + 7$	$-\ 2\ 7$
	$40 + 7$	$4\ 7$

Example: 741 – 367

Expanded method	**leading to**	
$700 + 40 + 1$	$\overset{600}{\cancel{700}} + \overset{130}{\cancel{40}} + \overset{11}{\cancel{1}}$	$\overset{6}{\cancel{7}}\ \overset{13}{\cancel{4}}\ \overset{11}{\cancel{1}}$
$-\ 300 + 60 + 7$	$-\ 300 + 60 + 7$	$-\ 3\ 6\ 7$
	$300 + 70 + 4$	$3\ 7\ 4$

Example: 563 − 241, no adjustment or decomposition needed

Expanded method	**leading to**
$500 + 60 + 3$	563
$-\ 200 + 40 + 1$	$-\ 241$
$300 + 20 + 2$	322

Useful Websites

http://www.kiddiesgames.com

http://www.topmarks.co.uk/maths-games/7-11-years/mental-maths

http://resources.woodlands-junior.kent.sch.uk/maths/

http://www.ictgames.com/subtraction.htm

http://www.mathszone.co.uk/