

Year 5 Addition and Subtraction Knowledge Organiser.

Addition and Subtraction		Knowledge Organiser																																											
Key Vocabulary	Addition	Subtraction																																											
Add	Place Value Grid: $3274 + 5601 = 8875$	Place Value Grid: $35\ 727 - 6313 = 29\ 414$																																											
Total	<table border="1" style="width: 100%; text-align: center;"> <tr><td style="background-color: #00a6d6; color: white; width: 20px;">Th</td><td>1000</td><td>1000</td><td>1000</td><td>1000</td></tr> <tr><td style="background-color: #00a6d6; color: white;">H</td><td>100</td><td>100</td><td>100</td><td>100</td></tr> <tr><td style="background-color: #00a6d6; color: white;">T</td><td>10</td><td>10</td><td>10</td><td>10</td></tr> <tr><td style="background-color: #00a6d6; color: white;">O</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </table>	Th	1000	1000	1000	1000	H	100	100	100	100	T	10	10	10	10	O	1	1	1	1	<table border="1" style="width: 100%; text-align: center;"> <tr><td style="background-color: #00a6d6; color: white; width: 20px;">TTh</td><td>10 000</td><td>10 000</td><td>10 000</td></tr> <tr><td style="background-color: #00a6d6; color: white;">Th</td><td>1000</td><td>1000</td><td>1000</td><td>1000</td><td>1000</td></tr> <tr><td style="background-color: #00a6d6; color: white;">H</td><td>100</td><td>100</td><td>100</td><td>100</td></tr> <tr><td style="background-color: #00a6d6; color: white;">T</td><td>10</td><td>10</td></tr> <tr><td style="background-color: #00a6d6; color: white;">O</td><td>1</td><td>1</td><td>1</td><td>1</td></tr> </table>	TTh	10 000	10 000	10 000	Th	1000	1000	1000	1000	1000	H	100	100	100	100	T	10	10	O	1	1	1	1
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Make		2 ten thousands left																																											
Plus		5 thousands – 6 thousands cannot be done. Exchange ten thousand for ten thousands becoming 15 thousands – 6 thousands = 9 thousands																																											
Sum		7 hundreds – 3 hundreds = 4 hundreds																																											
More		2 tens – 1 ten = 1 ten																																											
Altogether		7 ones – 3 ones = 4 ones																																											
Difference																																													
Subtract																																													
Less																																													
Minus																																													
Take away																																													
Column addition	Column Method	Column Method																																											
Column subtraction	Starting with the ones, add each column in turn. Regroup tens, hundreds, thousands, ten thousands and/or as required.	Starting with the ones, subtract each column in turn. Exchange tens, hundreds, thousands and/or ten thousands as required.																																											
Estimate																																													
Inverse operation																																													
Number facts																																													
Place value																																													
Complex																																													

Addition and Subtraction

Knowledge Organiser

Estimate and Approximate

Rounding to Estimate

$$41\ 635 + 7386 = 49\ 021$$

Round to ten:

$$41\ 630 + 7380 = 49\ 010$$

$$41\ 630 + 7390 = 49\ 020$$

$$41\ 640 + 7390 = 49\ 030$$

Rounding is not as accurate when both numbers are rounded up. A better estimate comes from "rounding" one down and one up.

Estimating on a Number Line



The arrow is about $\frac{3}{4}$ of the way across the line so it is 40 000.



Inverse Operations

Use the inverse to check:

53 476

32 732

20 744

To check $53\ 476 - 32\ 732 = 20\ 744$
use $32\ 732 + 20\ 744 = 53\ 476$

Start with a number, subtract 409 and double. I end with 6264.
To find the starting number use the inverse: halve, then add 409. Half of 6264 = 3132. $3132 + 409 = 3541$. The starting number was 3541.

Multistep Problems

Using a Bar Model

The sum of two numbers is 25 567.

The difference is 1875.



Subtract 1875 from 25 567 = 23 692.

Halve 23 692 to find smaller number = 11 846.

Add 1875 to find larger number = 13 721.

£20	£20 is used to buy 2 books costing
£3.75	£8.49
?	£3.75 and £8.49.

£12.24	£7.76
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How much change is given?

$$£3.75 + £8.49 = £12.24$$

$$£20.00 - £12.24 = £7.76$$