

## L.I: Addition with and without regrouping



by using the formal written method.

Activate Windows  
Go to Settings to activate Windows.

Read through the following 3 page guide to have an understanding of how to move from the partitioning method to formal column addition.

## Formal Column Addition Method.

How we used to work an answer out:

$$\begin{array}{r} 30 \\ 20 \\ \hline 50 \end{array} \quad \begin{array}{r} 5 \\ 4 + \\ \hline 9 \end{array} \quad \begin{array}{r} 200 \\ 300 \\ \hline 500 \end{array} \quad \begin{array}{r} 30 \\ 20 \\ \hline 50 \end{array} \quad \begin{array}{r} 5 \\ 4 \\ \hline 9 \end{array}$$

$\swarrow \quad \searrow$   
59

$\swarrow \quad \searrow$   
559

Now that we know that a digit in the hundreds column will be equivalent to hundreds and a digit in the tens column equivalent to tens - we can now move on to the formal column method. It goes like this:

1) Write out your question.

$$\begin{array}{r} 235 \\ 324 + \\ \hline \end{array}$$

2) Label your digits (if needed)

$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ 235 \\ 324 + \\ \hline \end{array}$$

3) Add the ones, then the tens and finally the hundreds

$$\begin{array}{r} \text{H} \quad \text{T} \quad \text{O} \\ 235 \\ 324 + \\ \hline 559 \end{array}$$

Do all these steps and you will have your answer! Things will be a little different if you need to regroup however...

## Regrouping in the ones column:

1) Write your question

$$\begin{array}{r} 327 \\ 225+ \\ \hline \end{array}$$

2) Label your digits (if needed)

$$\begin{array}{r} \text{H T O} \\ 327 \\ 225+ \\ \hline \end{array}$$

3) Because the digits in the ones column total more than 10, you will need to regroup like so:

$$\begin{array}{r} \text{H T O} \\ 327 \\ 225+ \\ \hline \end{array} \leftarrow 7+5=12$$

Put the 1  $\rightarrow$  ' 2  $\leftarrow$  Keep the 2  
ten in the in the ones  
tens column - column  
write it small

4) Add the tens column - DO NOT FORGET THE TEN YOU RE-GROUPED! Then simply add the hundreds column.

$$\begin{array}{r} \text{H T O} \\ 327 \\ 225+ \\ \hline 5'52 \end{array}$$

5) Check your answer is correct.

## Regrouping in the tens column.

1) Write your question

$$\begin{array}{r} 382 \\ 361 + \\ \hline \end{array}$$

2) Label your digits (if needed)

$$\begin{array}{r} \text{H T O} \\ 382 \\ 361 + \\ \hline \end{array}$$

3) Add the ones

$$\begin{array}{r} \text{H T O} \\ 382 \\ 361 + \\ \hline 3 \end{array}$$

4) Because the digits in the tens column total more than 100, you will need to regroup like so:

$$\begin{array}{r} \text{H T O} \\ 3 \text{ (8) } 2 \\ 3 \text{ (6) } 1 + \\ \hline 43 \end{array} \quad \begin{array}{l} 80+60=140 \\ \leftarrow \end{array}$$

Put the 1  
hundred in

the hundreds column -  
write it small.

The 40 stays in  
the tens column.

5) Add the hundreds column - DO NOT FORGET THE HUNDRED YOU RE-GROUPED!

$$\begin{array}{r} \text{H T O} \\ 382 \\ 361 + \\ \hline \overset{1}{7}43 \end{array}$$

6) Check your answer is correct.

The following questions are practice questions to get you used to using the new method. You can check your answers with a calculator and don't worry if they are wrong - work out your mistake and learn from it next time :)

1. Add the ones

YT

2. Add the tens

$$\begin{array}{r} 13 \\ 31 + \\ \hline \\ \hline \end{array}$$

1. Add the ones

YT

2. Add the tens

3. Add the hundreds

$$\begin{array}{r} 266 \\ 313 + \\ \hline \\ \hline \end{array}$$

Now let's practice questions that require regrouping. You can look back at your guide at any time to help!

1. Add the ones

2. Add the tens

3. Add the hundreds

Do any columns require regrouping?

$$\begin{array}{r} 123 \\ 538 + \\ \hline \\ \hline \end{array}$$

YT

1. Add the ones

2. Add the tens

3. Add the hundreds

Do any columns require regrouping?

$$\begin{array}{r} 273 \\ 565 + \\ \hline \\ \hline \end{array}$$

YT

1. Add the ones

YT

2. Add the tens

3. Add the hundreds

Do any columns require regrouping?

$$\begin{array}{r} 123 \\ 659 \\ \hline \\ \hline \end{array} +$$

1. Add the ones

YT

2. Add the tens

3. Add the hundreds

Do any columns require regrouping?

$$\begin{array}{r} 363 \\ 585 \\ \hline \\ \hline \end{array} +$$

$$\begin{array}{r} 123 \\ 239 \\ \hline \\ \hline \end{array} +$$

The answer to this question is:

a) 352

b) 3512

c) 362

d) 452

Depending on how you found those practice questions, pick either the bronze, silver or gold challenge to complete.

If you want to do a mix of some questions that is okay!

If you complete the gold you can then challenge yourself to the platinum questions!

Bronze		Silver	
$\begin{array}{r} 14 \\ 41 \\ \hline \end{array} +$	$\begin{array}{r} 22 \\ 71 \\ \hline \end{array} +$	$\begin{array}{r} 375 \\ 514 \\ \hline \end{array} +$	$\begin{array}{r} 223 \\ 654 \\ \hline \end{array} +$
$\begin{array}{r} 33 \\ 23 \\ \hline \end{array} +$	$\begin{array}{r} 18 \\ 51 \\ \hline \end{array} +$	$\begin{array}{r} 423 \\ 539 \\ \hline \end{array} +$	$\begin{array}{r} 118 \\ 255 \\ \hline \end{array} +$
$\begin{array}{r} 27 \\ 45 \\ \hline \end{array} +$	$\begin{array}{r} 27 \\ 66 \\ \hline \end{array} +$	$\begin{array}{r} 473 \\ 371 \\ \hline \end{array} +$	$\begin{array}{r} 363 \\ 283 \\ \hline \end{array} +$
	$\begin{array}{r} 135 \\ 129 \\ \hline \end{array} +$		$\begin{array}{r} 222 \\ 69 \\ \hline \end{array} +$



## Gold

$$\begin{array}{r} 532 \\ 467^+ \\ \hline \end{array}$$

$$\begin{array}{r} 225 \\ 659^+ \\ \hline \end{array}$$

$$\begin{array}{r} 308 \\ 489^+ \\ \hline \end{array}$$

$$\begin{array}{r} 118 \\ 707^+ \\ \hline \end{array}$$

$$\begin{array}{r} 666 \\ 291^+ \\ \hline \end{array}$$

$$\begin{array}{r} 567 \\ 192^+ \\ \hline \end{array}$$

$$\begin{array}{r} 222 \\ 94^+ \\ \hline \end{array}$$

Activate Windows

Go to Settings to activate Windows

## Platinum:

$$\begin{array}{r} 388 \\ 545^+ \\ \hline \end{array}$$

$$\begin{array}{r} 593 \\ 119^+ \\ \hline \end{array}$$