

Year 5 Addition




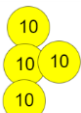




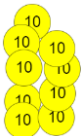










$\text{addend} + \text{addend} = \text{sum}$

Column addition

$51345 + 21392 =$

72737 whole	
51345 part	21392 part

addend
+ addend
<hr style="border-top: 3px double black;"/>
sum
<hr style="border-top: 3px double black;"/>

Step 1						
<p><i>TTh</i></p> 	<p><i>Th</i></p> 	<p><i>H</i></p> 	<p><i>T</i></p> 	<p><i>O</i></p> 	$\begin{array}{r} 51345 \\ + 21392 \\ \hline \end{array}$	$\begin{array}{r} 513.45 \\ + 213.92 \\ \hline \end{array}$
						
Step 2						
					$\begin{array}{r} 51345 \\ + 21392 \\ \hline 7 \end{array}$	$\begin{array}{r} 513.45 \\ + 213.92 \\ \hline 7 \end{array}$
						
<p><i>Push resources up</i></p>						

Step 3

TTh	Th	H	T	O

Push resources up

$$\begin{array}{r}
 51345 \\
 + 21392 \\
 \hline
 37 \\
 \hline
 1
 \end{array}$$

I can regroup
10 tens for
1 hundred.

$$\begin{array}{r}
 513.45 \\
 + 213.92 \\
 \hline
 .37 \\
 \hline
 1
 \end{array}$$

Step 4

TTh	Th	H	T	O

Push resources up

$$\begin{array}{r}
 51345 \\
 + 21392 \\
 \hline
 72737 \\
 \hline
 1
 \end{array}$$

$$\begin{array}{r}
 513.45 \\
 + 213.92 \\
 \hline
 727.37 \\
 \hline
 1
 \end{array}$$

Year 5

Subtraction

$$\text{minuend} - \text{subtrahend} = \text{difference}$$

Column subtraction

$$72737 - 21392 =$$

72737 whole	
51345 part	21392 part

minuend
- subtrahend
<hr/>
difference
<hr/>

Step 1						
TTh	Th	H	T	O		
					$\begin{array}{r} 72737 \\ - 21392 \\ \hline \end{array}$	$\begin{array}{r} 727.37 \\ - 213.92 \\ \hline \end{array}$
Step 2						
TTh	Th	H	T	O		
					$\begin{array}{r} 72737 \\ - 21392 \\ \hline 5 \end{array}$	$\begin{array}{r} 727.37 \\ - 213.92 \\ \hline 5 \end{array}$
<i>Pull resources down</i> ↓						

Step 3

TTh	Th	H	T	O

Pull resources down

I can regroup
1 hundred for
10 tens.

$$\begin{array}{r} 1 \\ 72737 \\ - 21392 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 1 \\ 727.37 \\ - 213.92 \\ \hline 5 \end{array}$$

Step 3

TTh	Th	H	T	O

Pull resources down

$$\begin{array}{r} 6 \ 1 \\ 72737 \\ - 21392 \\ \hline 51345 \end{array}$$

$$\begin{array}{r} 6 \ 1 \\ 727.37 \\ - 213.92 \\ \hline 513.45 \end{array}$$

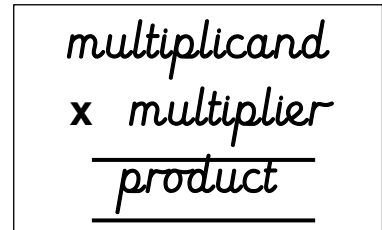
Year 5

Multiplication

multiplier × multiplicand = product

Short multiplication

$$\begin{array}{r}
 1324 \\
 \times \quad \quad \quad 6 \\
 \hline
 7944 \\
 \hline
 112
 \end{array}$$



Grid method to long multiplication

	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="padding: 5px;"><i>x</i></td> <td style="padding: 5px;"><i>10</i></td> <td style="padding: 5px;"><i>4</i></td> </tr> <tr> <td style="padding: 5px;"><i>10</i></td> <td style="padding: 5px;"><i>100</i></td> <td style="padding: 5px;"><i>40</i></td> </tr> <tr> <td style="padding: 5px;"><i>3</i></td> <td style="padding: 5px;"><i>30</i></td> <td style="padding: 5px;"><i>12</i></td> </tr> </table>	<i>x</i>	<i>10</i>	<i>4</i>	<i>10</i>	<i>100</i>	<i>40</i>	<i>3</i>	<i>30</i>	<i>12</i>
<i>x</i>	<i>10</i>	<i>4</i>								
<i>10</i>	<i>100</i>	<i>40</i>								
<i>3</i>	<i>30</i>	<i>12</i>								
$ \begin{array}{r} 14 \\ \times 13 \\ \hline 12 \quad (3 \times 4) \\ 30 \quad (3 \times 10) \\ 40 \quad (10 \times 4) \\ 100 \quad (10 \times 10) \\ \hline 182 \end{array} $	$ \begin{array}{r} 14 \\ \times 13 \\ \hline 42 \\ \times \\ 140 \\ \hline 182 \end{array} $									

Year 5
Division
dividend \div divisor = quotient

$$\begin{array}{r} \text{quotient} \\ \text{divisor} \overline{) \text{dividend}} \end{array}$$
 ← This is the division bracket.

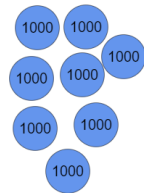

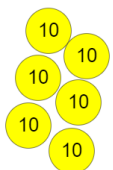
Short division

$8560 \div 4 = 2140$

Step 1

$8560 \div 4 =$

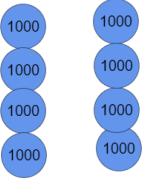
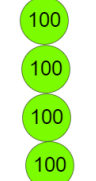
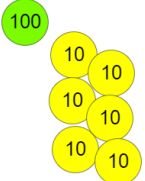
$4 \overline{) 8560}$

Th	H	T	O
			

Step 2

$8560 \div 4 =$

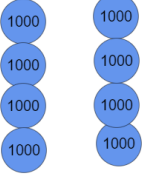

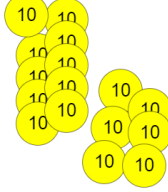
$4 \overline{) 8560} \begin{array}{r} 21 \\ 1 \end{array}$

Th	H	T	O
			<p>How many groups of 4 can I make with 8 thousands?</p> <p>How many groups of 4 can I make with 5 hundreds?</p>

Step 3

$$8560 \div 4 =$$

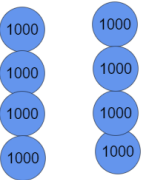

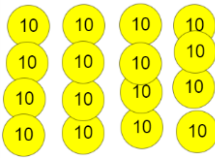
$$\begin{array}{r} 21 \\ 4 \overline{) 8560} \\ \underline{8} \\ 5 \\ \underline{4} \\ 1 \\ \underline{0} \\ 0 \end{array}$$

Th	H	T	O
			0 <i>can regroup 1 hundred for 10 tens.</i>

Step 4

$$8560 \div 4 =$$

$$\begin{array}{r} 2140 \\ 4 \overline{) 8560} \\ \underline{8} \\ 5 \\ \underline{4} \\ 1 \\ \underline{0} \\ 6 \\ \underline{4} \\ 2 \\ \underline{0} \\ 0 \end{array}$$

Th	H	T	O
			0

$$564 \div 5 = 112 \text{ r } 4$$

$$\begin{array}{r} 1 \quad 1 \quad 2 \quad \text{r}4 \\ 5 \overline{) 564} \\ \underline{5} \\ 6 \\ \underline{5} \\ 1 \\ \underline{0} \\ 4 \end{array}$$

$$564 \div 5 = 112.8$$

$$\begin{array}{r} 1 \quad 1 \quad 2 \quad . \quad 8 \\ 5 \overline{) 564.0} \\ \underline{5} \\ 6 \\ \underline{5} \\ 1 \\ \underline{0} \\ 4 \\ \underline{4} \\ 0 \end{array}$$