



Key Vocabulary
add
total
plus
sum
more
altogether
difference
subtract
less
minus
take away
multiple
column addition
column subtraction
exchange
estimate
inverse
solve problems
number facts
place value

### Addition and Subtraction Methods

#### 3-digit and 1-digit numbers

Not crossing 10s

$$268 - 4 = 264$$

Hundred	Ten	Ones
●	●●●●	●●●●●●
●	●●●●	●●●●●●

$$343 + 6 = 349$$
  

#### Crossing 10s (Exchanging)

324		
300	20	4
300	10	14

$$316 + 8 = 324$$

316	8

$$324 - 8 = 316$$

#### 3-digit and 2-digit numbers

Add and subtract tens

Hundred	Ten	Ones
●●	●●●	●
●●	●●	

$$451 + 3 \text{ tens} = 481 \quad (5 + 3 = 8)$$

$$451 - 4 \text{ tens} = 411 \quad (5 - 4 = 1)$$
  

#### Crossing 10s (Exchanging)

$$258 + 80 = 338$$

- Column method
- Count in 10s mentally
- Add 100, subtract 20

#### Crossing 10 and 100

$\begin{array}{r} 368 \\ +73 \\ \hline 1 \end{array}$	$\begin{array}{r} 368 \\ +73 \\ \hline 41 \end{array}$	$\begin{array}{r} 368 \\ +73 \\ \hline 441 \end{array}$
$\begin{array}{r} 1 \\ 1 \end{array}$	$\begin{array}{r} 1 \\ 11 \end{array}$	$\begin{array}{r} 1 \\ 11 \\ 11 \end{array}$

$\begin{array}{r} 31 \\ 441 \\ -73 \\ \hline 8 \end{array}$	$\begin{array}{r} 3131 \\ 441 \\ -73 \\ \hline 68 \end{array}$	$\begin{array}{r} 3131 \\ 441 \\ -73 \\ \hline 368 \end{array}$
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#### 3-digit numbers

Not crossing

$$679 - 351 = 328$$

Hundred	Ten	Ones
●●●	●●●	●●●●●
●●●	●●●	●●●●●

#### Crossing 10s (Exchanging)

$$\begin{array}{r} 269 \\ +154 \\ \hline 423 \\ 11 \end{array}$$

514		$\begin{array}{r} 4101 \\ 514 \\ -268 \\ \hline 246 \end{array}$
268	?	


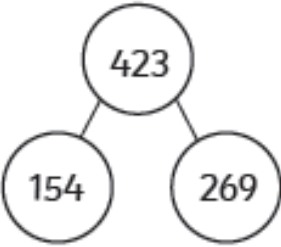
  

#### Add and Subtract 100s

$$284 + 300 = 584$$

Hundred	Ten	Ones



Estimate	Check Answers																				
<p>Estimate by dividing the hundred into 250 and 225. Estimate 10s (330, 340) between 325 and 350.</p>  <p>Estimate <math>167 - 89</math> Use near numbers <math>170 - 90 = 80</math></p> <p>Near numbers:</p> <table style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="background-color: #00bcd4; padding: 5px;">413</td> <td style="background-color: #00bcd4; padding: 5px;">279</td> <td style="background-color: #00bcd4; padding: 5px;">521</td> <td style="background-color: #00bcd4; padding: 5px;">782</td> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td style="background-color: #c8e6c9; padding: 5px;">400</td> <td style="background-color: #c8e6c9; padding: 5px;">300</td> <td style="background-color: #c8e6c9; padding: 5px;">500</td> <td style="background-color: #c8e6c9; padding: 5px;">800</td> </tr> </table>	413	279	521	782	↓	↓	↓	↓	400	300	500	800	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr style="background-color: #00bcd4; color: white;"> <td colspan="2" style="text-align: center; padding: 5px;">347</td> </tr> <tr> <td style="background-color: #b39ddb; text-align: center; padding: 5px;">273</td> <td style="background-color: #c8e6c9; text-align: center; padding: 5px;">74</td> </tr> </table> <p><math>347 - 74 = 273</math> can be checked using <math>273 + 74 = 347</math></p> <p>This part whole shows the inverse calculations using these three numbers.</p>  <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="padding: 5px; text-align: center;"><math>154 + 269 = 423</math></td> <td style="padding: 5px; text-align: center;"><math>269 + 154 = 423</math></td> </tr> <tr> <td style="padding: 5px; text-align: center;"><math>423 - 154 = 269</math></td> <td style="padding: 5px; text-align: center;"><math>423 - 269 = 154</math></td> </tr> </table>	347		273	74	$154 + 269 = 423$	$269 + 154 = 423$	$423 - 154 = 269$	$423 - 269 = 154$
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Estimate  $249 - 71$ . What near numbers could you use?  
How can you check  $782 + 53 = 835$ ? What is the same and what is different about these calculations?