

# Discussion Problems

## Step 1: Add and Subtract Multiples of 100

### National Curriculum Objectives:

Mathematics Year 3: (3C1) [Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds](#)

### About this resource:

This resource has been designed for pupils who understand the concepts within [this step](#). It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.

There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.

We recommend self or peer marking using the answer page provided to promote discussion and self-correction.

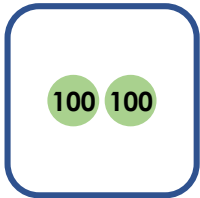
More [Year 3 Addition and Subtraction](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

# Add and Subtract Multiples of 100

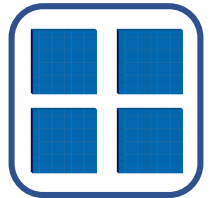
1. Complete the calculation using the representations below. Explore different combinations which make a maximum total of 1,000.

$$\boxed{\phantom{000}} + \boxed{\phantom{000}} = \boxed{\phantom{000}}$$



five hundred

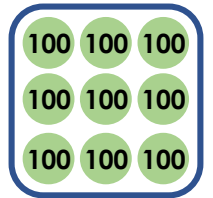
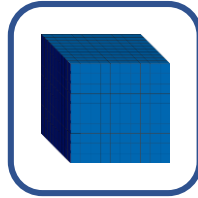
100



700

600

eight hundred



DP

2. Has Jonah matched these loop cards correctly?

Prove it.

$300 + 100$	800
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$200 + 400$	400
-------------	-----

300	$100 + 100$
-----	-------------

500	$200 + 200$
-----	-------------

$100 + 900$	
100	

600	
	$700 - 200$

$500 + 400$	1,000
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$900 - 100$	900
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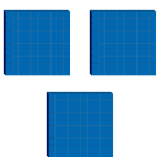
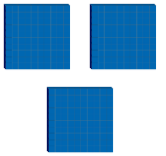
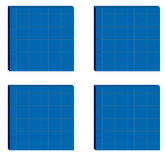
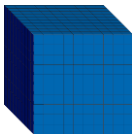
400	$400 - 100$
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200	$100 - 0$
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DP

# Add and Subtract Multiples of 100

1. Complete the calculation using the representations below. Explore different combinations which make a maximum total of 1,000. **Various answers, for example:**

100	+	<div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> </div>	=	
<div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> </div>		five hundred	100	
700	600	eight hundred		<div style="display: grid; grid-template-columns: repeat(3, 1fr); gap: 5px;"> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> <div style="border: 1px solid green; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; font-size: 0.8em;">100</div> </div>

DP

2. Has Jonah matched these loop cards correctly?

Prove it.

<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">200 +</td><td style="border: 1px solid black; padding: 5px;">400</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">400</td><td style="border: 1px solid black; padding: 5px;">400</td></tr> </table>	200 +	400	400	400	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">300 +</td><td style="border: 1px solid black; padding: 5px;">800</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">100</td><td style="border: 1px solid black; padding: 5px;">800</td></tr> </table>	300 +	800	100	800	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">900 -</td><td style="border: 1px solid black; padding: 5px;">900</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">100</td><td style="border: 1px solid black; padding: 5px;">900</td></tr> </table>	900 -	900	100	900	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border: 1px solid black; padding: 5px;">500 +</td><td style="border: 1px solid black; padding: 5px;">1,000</td></tr> <tr><td style="border: 1px solid black; padding: 5px;">400</td><td style="border: 1px solid black; padding: 5px;">1,000</td></tr> </table>	500 +	1,000	400	1,000
200 +	400																		
400	400																		
300 +	800																		
100	800																		
900 -	900																		
100	900																		
500 +	1,000																		
400	1,000																		
600			100 +																
700 -			900																
200			100																
500	200 +	400	400 -																
	200	100	100																
		300	100 +																
			100																
			200																
			100 - 0																

Jonah has not arranged them correctly. Accept any answer which correctly orders the loop cards.

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