

Homework/Extension

Step 4: Inverse Operations

National Curriculum Objectives:

Mathematics Year 5: (5C2) [Add and subtract whole numbers with more than 4 digits, including using formal written methods \(columnar addition and subtraction\)](#)

Mathematics Year 5: (5C4) [Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Check answers using an inverse operation. Includes up to 4-digit numbers with no exchanging. Uses column format.

Expected Check answers using an inverse operation. Includes up to 5-digit numbers and exchanging for both addition and subtraction. Uses column format.

Greater Depth Check answers using an inverse operation. Includes up to 5-digit numbers and exchanging for both addition and subtraction. Uses linear presentation with numbers presented in context, i.e. money, measurement.

Questions 2, 5 and 8 (Varied Fluency)

Developing Use an inverse operation to calculate missing numbers. Includes up to 4-digit numbers with no exchanging. Uses column format.

Expected Use an inverse operation to calculate missing numbers. Includes up to 5-digit numbers and exchanging for both addition and subtraction. Uses column format and some linear presentation.

Greater Depth Use an inverse operation to calculate missing numbers. Includes up to 5-digit numbers and exchanging for both addition and subtraction. Uses linear presentation with numbers presented in context, i.e. money, measurement.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Prove which calculation is correct when using an inverse operation. Includes up to 4-digit numbers with no exchanging. Uses column format and a bar model.

Expected Prove which calculation is correct when using an inverse operation. Includes up to 5-digit numbers and exchanging for both addition and subtraction. Uses column format and a bar model.

Greater Depth Prove which calculation is correct when using an inverse operation. Includes up to 5-digit numbers and exchanging for both addition and subtraction. Uses a bar model with numbers presented in context, i.e. money, measurement. Simple conversions required.

More [Year 5 Addition and Subtraction](#) resources.

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Inverse Operations

1. Complete the calculation below and check your answer using the inverse operation.

	5	9	6	9
-	2	8	4	5
<hr/>				
<hr/>				

+				
<hr/>				
<hr/>				



VF
HW/Ext

2. Use an inverse operation to calculate the missing numbers.

A. $712 + \boxed{} = 3,859$

B. $2,574 + \boxed{} = 9,698$

-				
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<hr/>				

-				
<hr/>				
<hr/>				



VF
HW/Ext

3. Lain thinks the missing number is 8,657 because you have to add 4,896 to 3,761 when calculating the inverse.

Maya thinks the missing number is 1,135 because the inverse is $4,896 - 3,761$.

4,896	
?	3,761

<hr/>				
<hr/>				

Who is correct? Complete your own calculation to prove it.



RPS
HW/Ext

Inverse Operations

4. Complete the calculation below and check your answer using the inverse operation.

	5	4	9	7	3
-	3	6	3	2	8
<hr/>					
<hr/>					

+					
<hr/>					
<hr/>					



VF
HW/Ext

5. Use an inverse operation to calculate the missing numbers.

A. $8,267 + \boxed{} = 12,429$

B. $6,925 + \boxed{} = 18,542$

-					
<hr/>					
<hr/>					

-					
<hr/>					
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VF
HW/Ext

6. Toby thinks the missing number is 32,186 because the inverse is $45,648 - 13,462$.

Ivy thinks the missing number is 59,110 because you have to add 45,648 to 13,462 when calculating the inverse.

45,648	
?	13,462

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Who is correct? Complete your own calculation to prove it.



RPS
HW/Ext

Inverse Operations

7. Complete the calculation below and check your answer using the inverse operation.

Calculation

Inverse Check

A. $£34,478 - £26,392 =$

B. $49,392\text{m} + 9,786\text{m} =$

C. $25,269\text{p} - 1,452\text{p} =$



VF
HW/Ext

8. Use an inverse operation to calculate the missing numbers.

A. $73,238\text{cm} +$ $= 89,594\text{cm}$

B. $+ 18,609\text{km} = 32,883\text{km}$

C. $- 12,937\text{p} = 519\text{p}$



VF
HW/Ext

9. Pedro thinks the missing number is 25,315p because you have to add 23,761p to £15.54 when calculating the inverse.
Scarlett thinks the missing number is 22,207p because the inverse is $23,761\text{p} - £15.54$.

23,761p	
?	£15.54

Who is correct? Complete your own calculation to prove it.



RPS
HW/Ext

Homework/Extension

Inverse Operations

Developing

1.

	5	9	6	9
-	2	8	4	5
<hr/>				
	3	1	2	4
<hr/>				

	3	1	2	4
+	2	8	4	5
<hr/>				
	5	9	6	9
<hr/>				

or

	2	8	4	5
+	3	1	2	4
<hr/>				
	5	9	6	9
<hr/>				

2. A. $712 + 3,147 = 3,859$ B. $2,574 + 7,124 = 9,698$

3. Maya is correct because the inverse is $4,896 - 3,761 = 1,135$

Expected

4.

	4 5	1 4	9	6 7	1 3
-	3	6	3	2	8
<hr/>					
	1	8	6	4	5
<hr/>					

	3	6	3	2	8
+	1	8	6	4	5
<hr/>					
	5	4	9	7	3
<hr/>					
	1			1	

or

	1	8	6	4	5
+	3	6	3	2	8
<hr/>					
	5	4	9	7	3
<hr/>					
	1			1	

5. A. $8,267 + 4,162 = 12,429$ B. $6,925 + 11,617 = 18,542$

6. Toby is correct because the inverse is $45,648 - 13,462 = 32,186$.

Greater Depth

7. A. $£34,478 - £26,392 = £8,086$
 $£26,392 + £8,086 = £34,478$ or $£8,086 + £26,392 = £34,478$
 B. $49,392\text{m} + 9,786\text{m} = 59,178\text{m}$
 $59,178\text{m} - 49,392\text{m} = 9,786\text{m}$ or $59,178\text{m} - 9,786\text{m} = 49,392\text{m}$
 C. $25,269\text{p} - 1,452\text{p} = 23,817\text{p}$
 $23,827\text{p} + 1,452\text{p} = 25,269\text{p}$ or $1,452\text{p} + 23,827\text{p} = 25,269\text{p}$

8. A. $73,238\text{cm} + 16,356\text{cm} = 89,594\text{cm}$

B. $14,274\text{km} + 18,609\text{km} = 32,883\text{km}$

C. $13,456\text{p} - 12,937\text{p} = 519\text{p}$

9. Scarlett is correct because the inverse is $23,761\text{p} - £15.54 = 22,207\text{p}$.