

Discussion Problems

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](#)

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 5 Addition and Subtraction](#) resources.

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

Inverse Operations

1. Complete the set of loop cards by identifying the missing number on each card and arranging them in the correct order, matching each calculation with its inverse.

$4,765 - \underline{\hspace{2cm}}$ $= 2,827$	$\underline{\hspace{2cm}} + 2,851$ $= 5,867$
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$8,991 + \underline{\hspace{2cm}}$ $= 14,529$	$7,394 + \underline{\hspace{2cm}}$ $= 16,324$
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$2,851 + \underline{\hspace{2cm}}$ $= 4,281$	$\underline{\hspace{2cm}} - 4,765$ $= 2,720$
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$7,394 + \underline{\hspace{2cm}}$ $= 18,946$	$\underline{\hspace{2cm}} - 8,911$ $= 6,552$
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$5,867 - \underline{\hspace{2cm}}$ $= 3,016$	$4,281 - \underline{\hspace{2cm}}$ $= 1,430$
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$2,720 + \underline{\hspace{2cm}}$ $= 7,485$	$6,552 + \underline{\hspace{2cm}}$ $= 15,463$
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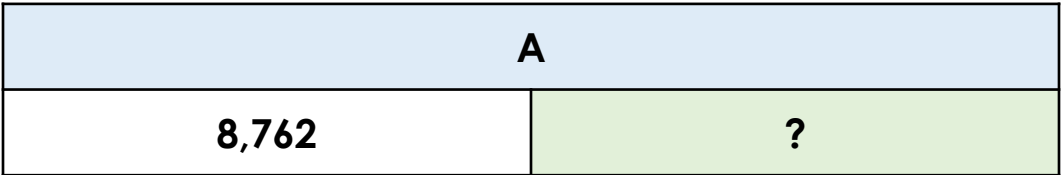
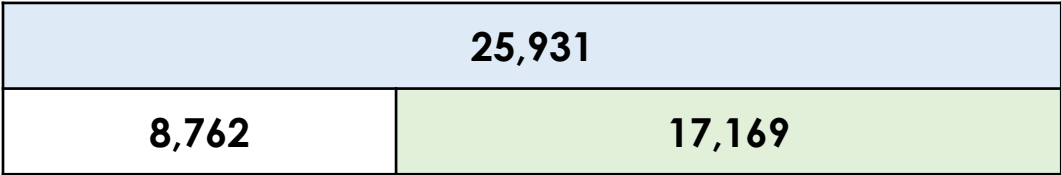
$14,529 - \underline{\hspace{2cm}}$ $= 5,618$	$18,946 - \underline{\hspace{2cm}}$ $= 11,552$
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$16,324 - \underline{\hspace{2cm}}$ $= 8,930$	$\underline{\hspace{2cm}} + 1,938$ $= 4,765$
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DP

2. Phyllis has represented a number using a bar model. When completed, A is less than 50,000 but more than 25,000. Explore what the value of the missing number could be to find A.

For example:



DP

Inverse Operations

1. Complete the set of loop cards by identifying the missing number on each card and arranging them in the correct order, matching each calculation with its inverse.

$2,827 + 1,938$

$= 4,765$

$16,324 - 7,394$

$= 8,930$

$4,765 - 1,938$

$= 2,827$

$3,016 + 2,851$

$= 5,867$

$5,867 - 2,851$

$= 3,016$

$4,281 - 2,851$

$= 1,430$

$2,851 + 1,430$

$= 4,281$

$7,485 - 4,765$

$= 2,720$

$7,394 + 8,930$

$= 16,324$

$8,911 + 5,618$

$= 14,529$

$14,529 - 8,911$

$= 5,618$

$18,946 - 7,394$

$= 11,552$

$7,394 + 11,552$

$= 18,946$

$15,463 - 8,911$

$= 6,552$

$2,720 + 4,765$

$= 7,485$

$6,552 + 8,911$

$= 15,463$

2. Phyllis has represented a number using a bar model. When completed, A is less than 50,000 but more than 25,000. Explore what the value of the missing number could be to find A.

Various answers, for example:

