Using the Inverse to Solve Problems

Adult Guidance with Question Prompts

Children recognise and use the inverse relationship between addition and subtraction to check calculations and solve missing number problems. In this activity, they use the inverse operation to find the missing number in a calculation or bar model and check their answer with equipment or a number line. Children will need a number line to 20 and equipment to check their answers (e.g. base ten blocks, ten-frames and counters) for this activity.

How can you find out which numbers are under the mud?

How can you use the inverse?

What is the inverse of addition/subtraction?

What inverse calculation will you write?

Does your answer seem right?

How can you check your answer?

How can you use the number line to check?

Show me with the equipment.

Why do you need to check your calculation?

Using the Inverse to Solve Problems

Use the inverse to find the missing numbers.

 + 7 = 15

16	
8	

12 +  = 20

18	
7	

 - 9 = 8

14	
	8

 - 9 = 11

Use equipment or a number line to check your answers.

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Children recognise and use the inverse relationship between addition and subtraction to check calculations and solve missing number problems. They identify the inverse Ali should use to find a missing number, deciding which subtraction calculation should be used and explaining their thinking. This activity addresses the misconceptions around how the same numbers can be positioned differently in the calculation but only
one of these options will help Ali find the missing number.

What is the inverse of addition?

Which of these calculations are subtractions?

Which of the subtractions is the one you need to use?

How do you know?

Why can't Ali use the other one?

What is the missing number?

How can you check you are right?

What is the inverse of subtraction?

What addition could you do to find the missing number?

How can you rearrange these numbers into an addition calculation that will help you find the missing number?

How can you check your answer?

Using the Inverse to Solve Problems

Ali tries to find the missing number in this calculation.

 + 15 = 19

Which of these calculations should he use?

19 + 15 = ?

15 – 19 = ?

19 – 15 = ?

15 + 19 = ?

Explain your choice and find the missing number for Ali.

Check your answer.

Now, find this missing number:

? - 9 = 5

Using the Inverse to Solve Problems

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Children recognise and use the inverse relationship between addition and subtraction to check calculations and solve missing number problems. In this activity, children find two missing numbers in a calculation and check their calculations using the inverses. They can use equipment to help support their thinking.

What one-digit number could you add to 11?

What would you get when adding them together?

Show me with equipment.

How could you check you are correct?

What calculation could you do to check you are right?

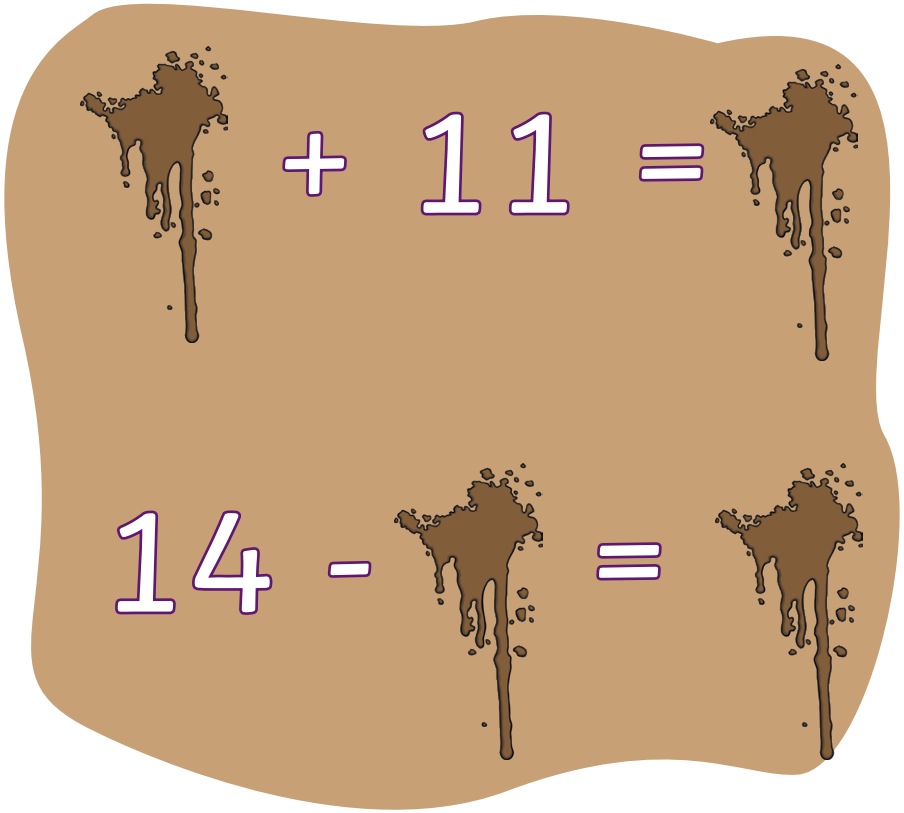
What one-digit number could you subtract from 14?

Show me how to check you are correct.

Compare your calculations with a friend; are they the same or different? Why?

Using the Inverse to Solve Problems

Ali's work is covered in mud! Find ten different ways to complete each calculation using a one-digit number and a two-digit number.



Use equipment to represent each calculation.

Check your calculations using the inverse.