

Subtract Two 2-Digit Numbers, Not Crossing Ten

Adult Guidance with Question Prompts



Children build fluency subtracting two 2-digit numbers, not crossing ten. They practise using a range of strategies, including crossing out pictures representing tens and ones, using number facts and counting back on number lines. Children may also benefit from using equipment representing tens and ones to support their learning.

The children are having a sale to raise funds.

Our job is to find out how much they have left to sell another day.

What can you tell me about the sunflowers?

How many sunflowers did they have to start with? How do you know?

How many did they sell? Show me where to find out.

What can you use to find out how many are left?

Can you use a different strategy to check?

Repeat for the other calculations.

What do you notice about the number of things left to sell?

Subtract Two 2-Digit Numbers, Not Crossing Ten



How much do we have left?

You could find out by subtracting the tens first.



$45 - 12 = \square$

A number line starting at 45. A bracket from 45 to 30 is labeled '- 10'. A bracket from 30 to 28 is labeled '- 2'. Two empty circles are placed above the number line at 30 and 28.

$57 - 24 = \square$

A number line starting at 57. A bracket from 57 to 33 is labeled '- 24'. Two empty circles are placed above the number line at 33 and 31.

Or you could subtract the ones first.

$79 - 46 = \square$

A number line starting at 79. A bracket from 79 to 39 is labeled '- 40'. A bracket from 39 to 33 is labeled '- 6'. Two empty circles are placed above the number line at 39 and 33.

$68 - 35 = \square$

A number line starting at 68. A bracket from 68 to 33 is labeled '- 35'. Two empty circles are placed above the number line at 33 and 31.

Subtract Two 2-Digit Numbers, Not Crossing Ten

Adult Guidance with Question Prompts



Children apply their reasoning skills to see which child is correct. Children explain their reasoning using equipment to support their explanations. They use a range of strategies, including crossing out pictures representing tens and ones, using number facts and counting back on number lines.

Do you know who is correct?

What can we do to find out?

Show me how you can solve this calculation.

Can you check it using a different method?

Who got the correct answer?

What mistake did the other child make?

Do you know who is correct?

What can we do to find out?

Show me how you can solve this calculation.

Can you check it using a different method?

Who got the correct answer? (neither child is correct)

What mistake did the children make?

What advice could you give them to help them improve?

Subtract Two 2-Digit Numbers, Not Crossing Ten



Samir and Aima are seeing what they have left after the fundraising event.



Samir

$$96 - 24 =$$

There are 72 carrot seeds left.



Aima

There are 62 carrot seeds left.

Who is correct? Prove it.



Samir

$$83 - 51 =$$

There are 33 flower seeds left.



Aima

There are 30 flower seeds left.

Who is correct? Prove it.

Subtract Two 2-Digit Numbers, Not Crossing Ten

Adult Guidance with Question Prompts



Children subtract two 2-digit numbers, not crossing ten. They apply their problem-solving skills to explore missing number challenges and complete a 'find all possibilities' investigation. Children use number facts and blank number lines to find solutions.

What are they asking you to find out? What information do you have?

Where would this go on your number line? What steps can you take to work out the missing number?

Can you use a different strategy to check?

Repeat for the second problem.

Which number should follow the equals symbol? Remember we are subtracting two 2-digit numbers.

Where would be a good place to start? How can you make sure that you find all of the possibilities?

Subtract Two 2-Digit Numbers, Not Crossing Ten



Can you help the friends find the missing numbers?



How many carrots did I sell?

$$59 - \square = 27$$

27 59



How many cakes did I start with?

$$\square - 23 = 64$$



What could the missing numbers be?

$$\square - \square = 24$$

How many possibilities can you find?

How Many Left?

To subtract two 2-digit numbers, not crossing ten.

Use number facts and empty number lines to find the answers.



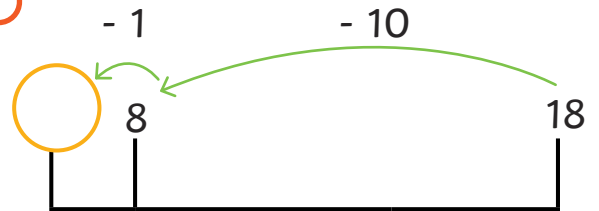
How many will I have left?

If $1 - 1 = 0$, then
 $10 - 10 = 0$ tens.

10 cakes



$18 - 11 = \square$

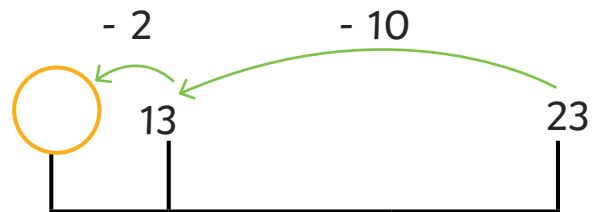


10 cakes

10 cakes



$23 - 12 = \square$



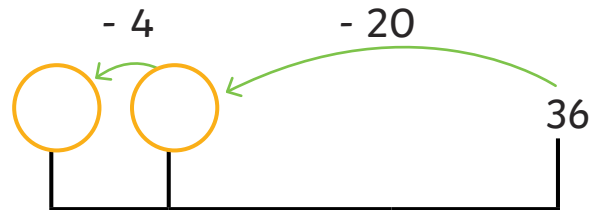
10 cakes

10 cakes

10 cakes



$36 - 24 = \square$



10 cakes

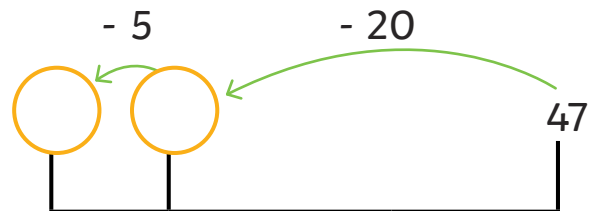
10 cakes

10 cakes

10 cakes



$47 - 25 = \square$



10 cakes

10 cakes

10 cakes

10 cakes

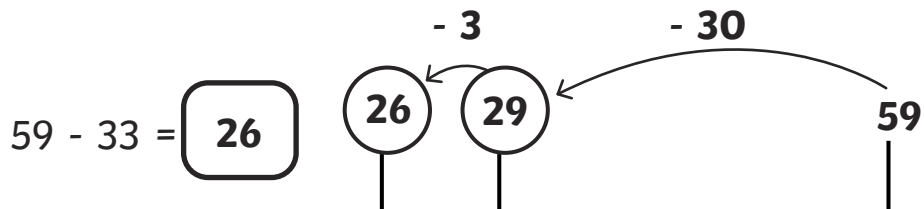
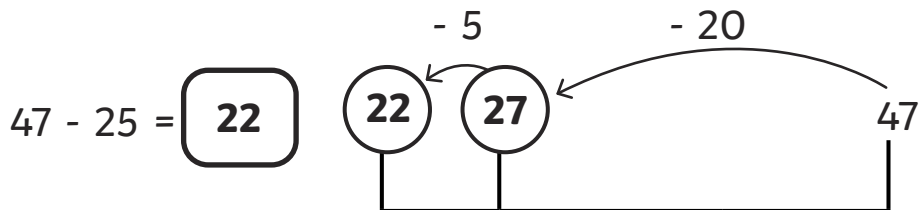
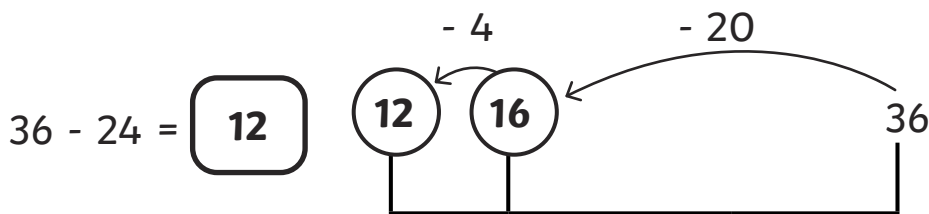
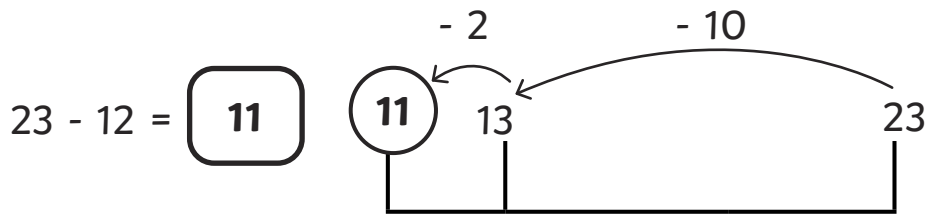
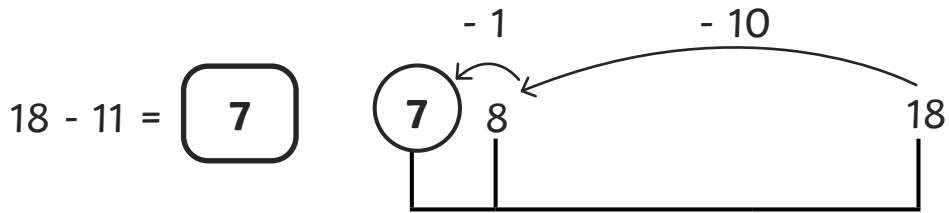
10 cakes



$59 - 33 = \square$



How Many Left? **Answers**



How Many Left?

To subtract two 2-digit numbers, not crossing ten.

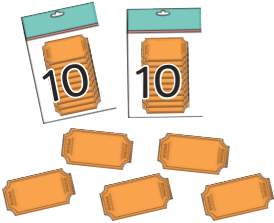


How many will I have left?

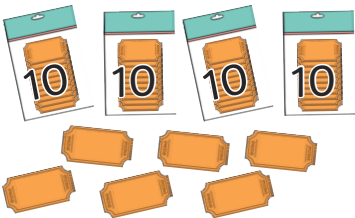
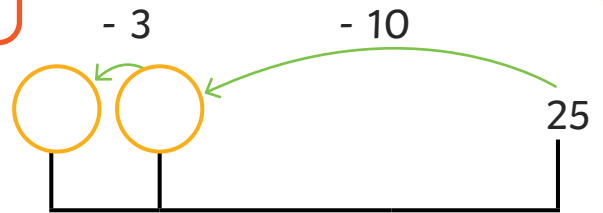


You could subtract the tens first.

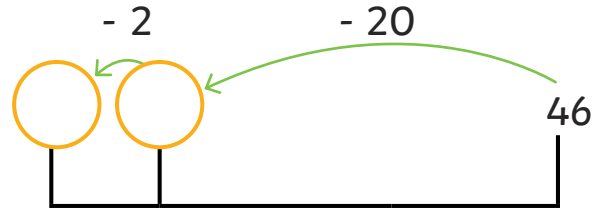
If $2 - 1 = 1$, then
 $20 - 10 = 10$.



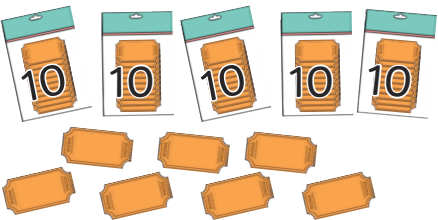
$$25 - 13 = \square$$



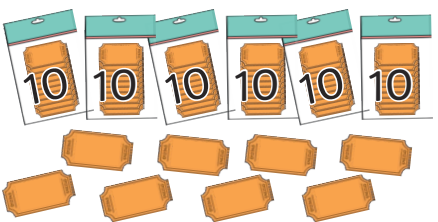
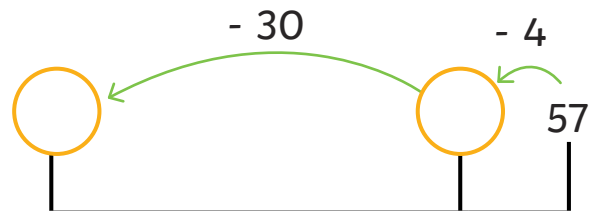
$$46 - 22 = \square$$



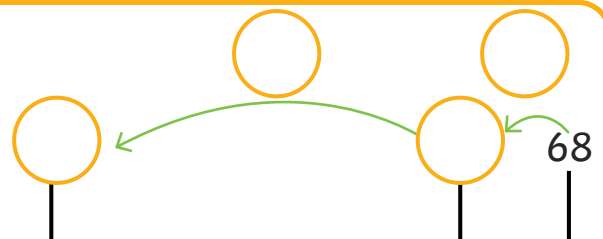
Or you could subtract the ones first.



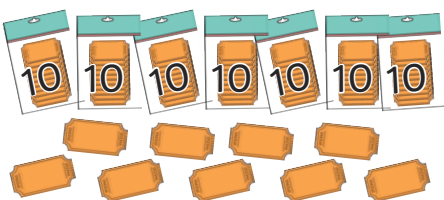
$$57 - 34 = \square$$



$$68 - 33 = \square$$



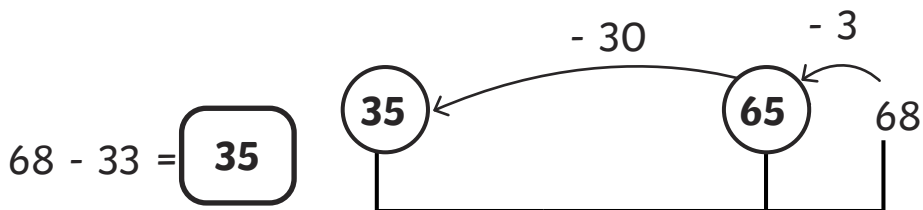
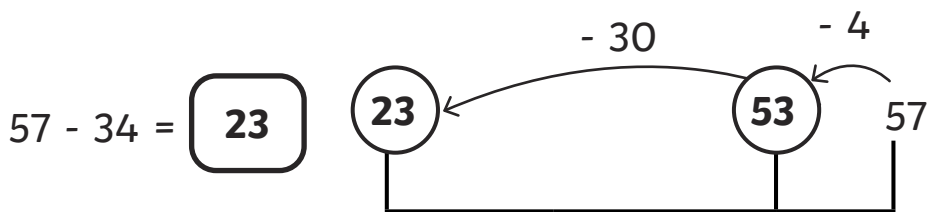
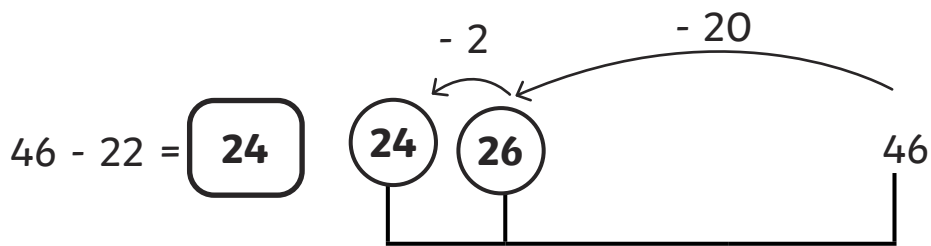
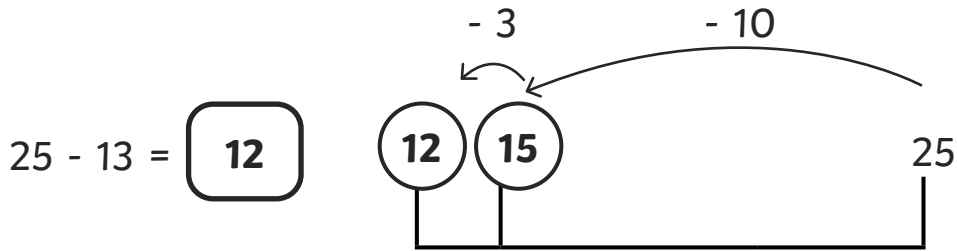
Will you choose to subtract the tens or the ones first?



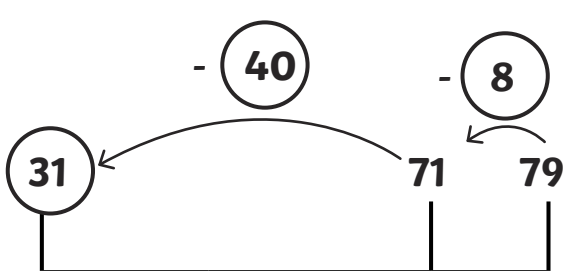
$$79 - 48 = \square$$



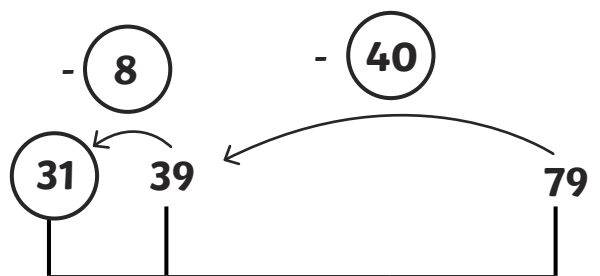
How Many Left? **Answers**



$79 - 48 = \boxed{31}$



or



How Many Left?

To subtract two 2-digit numbers, not crossing ten.

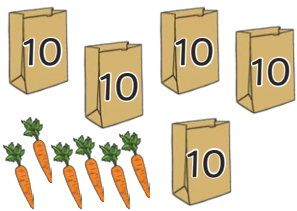


How many will I have left?

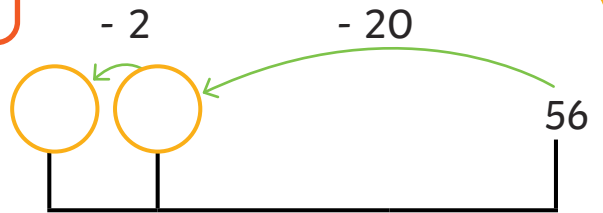


You could subtract the tens first.

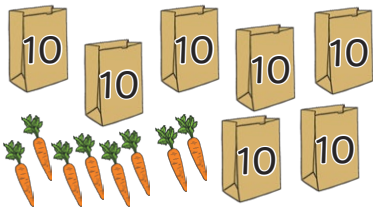
If $5 - 2 = 3$, then
 $50 - 20 = 30$.



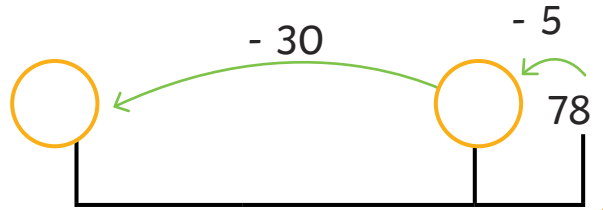
$$56 - 22 = \square$$



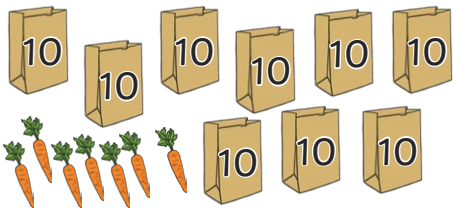
Or you could subtract the ones first.



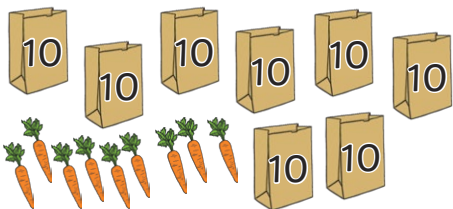
$$78 - 35 = \square$$



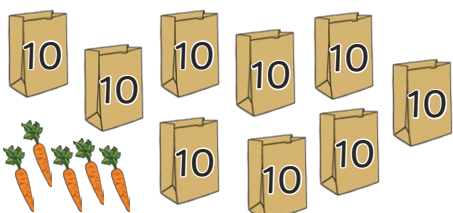
Will you choose to subtract the tens or the ones first?



$$97 - 42 = \square$$

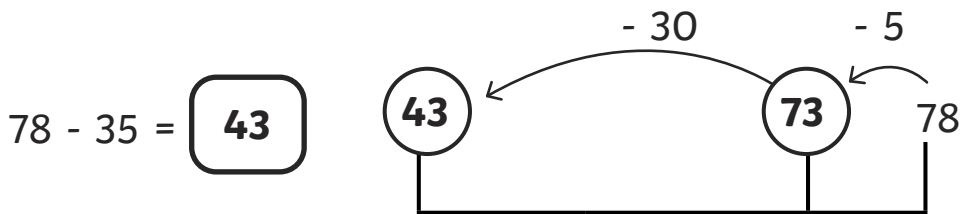
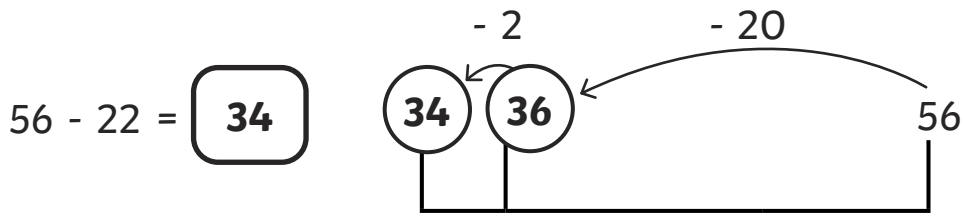


$$89 - 27 = \square$$

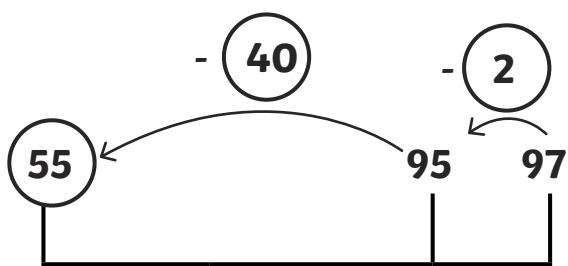


$$95 - 64 = \square$$

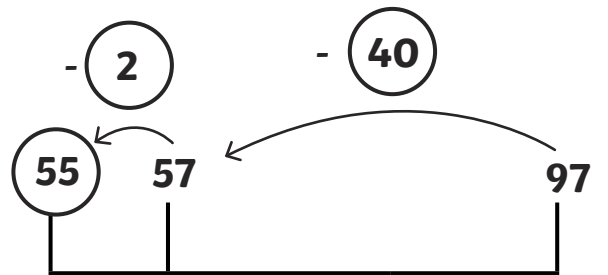
How Many Left? Answers



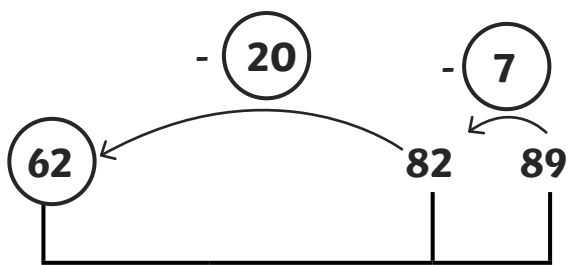
$97 - 42 = \boxed{55}$



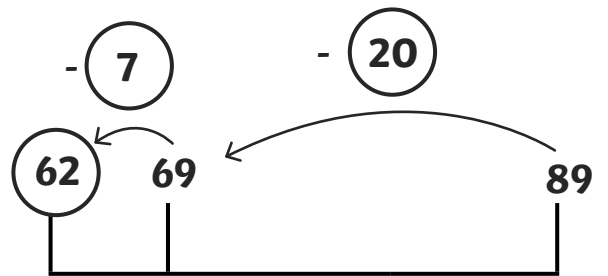
or



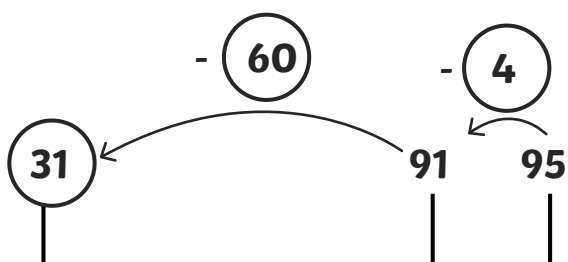
$89 - 27 = \boxed{62}$



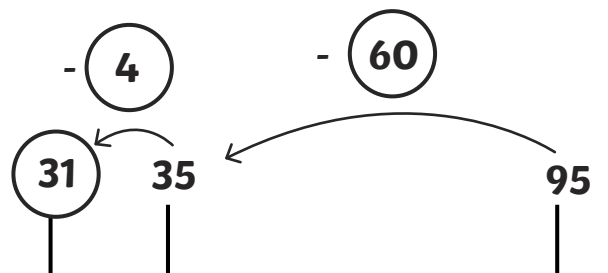
or



$95 - 64 = \boxed{31}$



or





$45 - 12 = 33$

Diagram showing a number line starting at 45. A curved arrow labeled "- 10" points from 45 to 35. A second curved arrow labeled "- 2" points from 35 to 33. Vertical lines connect 33 and 35 to the bottom axis.

$57 - 24 = 33$

Diagram showing a number line starting at 57. A curved arrow labeled "- 20" points from 57 to 37. A second curved arrow labeled "- 4" points from 37 to 33. Vertical lines connect 33 and 37 to the bottom axis.

$79 - 46 = 33$

Diagram showing a number line starting at 79. A curved arrow labeled "- 6" points from 79 to 73. A second curved arrow labeled "- 40" points from 73 to 33. Vertical lines connect 33 and 73 to the bottom axis.

$68 - 35 = 33$

Diagram showing a number line starting at 68. A curved arrow labeled "- 5" points from 68 to 63. A second curved arrow labeled "- 30" points from 63 to 33. Vertical lines connect 33 and 63 to the bottom axis.

Samir is correct.

Neither child is correct.





$$59 - \boxed{32} = 27$$

Diagram illustrating the subtraction process for $59 - 32 = 27$. The number 59 is on the right and 27 is on the left. A curved arrow points from 59 to 29, labeled with a circled 30 and a minus sign. A second curved arrow points from 29 to 27, labeled with a circled 2 and a minus sign. Vertical lines connect 27 to 29 and 59 to 29.

$$\boxed{87} - 23 = 64$$

Diagram illustrating the subtraction process for $87 - 23 = 64$. The number 87 is on the right and 64 is on the left. A curved arrow points from 87 to 67, labeled with a circled 20 and a minus sign. A second curved arrow points from 67 to 64, labeled with a circled 3 and a minus sign. Vertical lines connect 64 to 67 and 87 to 67.

Please accept any calculations subtracting a two-digit number from another two-digit number giving the answer of 24.

Many possible answers, for example:

$$34 - 10 = 24$$

$$35 - 11 = 24$$

$$36 - 12 = 24$$