

Add Three 1-Digit Numbers

Adult Guidance with Question Prompts



Children add three 1-digit numbers by spotting known number facts within the calculations. This activity focuses on spotting number facts of ten and number doubles. Children may benefit from using ten-frames or part-whole models to support their learning.

Can you spot a number fact that you already know which you could use?

How will using number facts of ten or doubles help you solve this calculation faster?

Can you ring the two numbers that make ten or show a double?

What will you do next?

Does it matter if the number facts of ten or doubles aren't next to each other in the calculation?

Why not?

If I changed the order of the numbers, what would happen to the answer?

Add Three 1-Digit Numbers



Add each set of 3 numbers.

Circle number facts of ten or number doubles to help you.



$2 + 4 + 8 = \square$

$3 + 3 + 6 = \square$

$6 + 1 + 9 = \square$

$5 + 0 + 5 = \square$

$9 + 4 + 4 = \square$

$7 + 3 + 2 = \square$

$6 + 8 + 6 = \square$

$2 + 8 + 8 = \square$

$0 + 4 + 6 = \square$

$7 + 5 + 7 = \square$

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Children add three 1-digit numbers by spotting known number facts within the calculations. They apply their reasoning skills to determine which calculations are true and which are false. Children find ways to demonstrate or explain their reasoning.

Can number facts of ten help us with all of these calculations?

Why? Why not?

Can number doubles help us with some of these calculations?

Can you see any calculations where number doubles would help?

What could you do if you couldn't see a number fact of ten or a number double?

Which are true?

Can you prove it?

Which are false?

How do you know?

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True or false? How do you know?

Use number facts of ten or number doubles to help you.



$$8 + 8 + 4 = 20$$

$$3 + 9 + 3 = 16$$

$$9 + 5 + 5 = 19$$

$$6 + 3 + 4 = 13$$

$$4 + 4 + 7 = 14$$

$$4 + 6 + 6 = 16$$

$$9 + 7 + 1 = 18$$

$$9 + 2 + 9 = 20$$

$$7 + 8 + 4 = 19$$

$$5 + 6 + 3 = 14$$

Add Three 1-Digit Numbers

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Children add three 1-digit numbers by spotting known number facts within the calculations. In this activity, children find different ways to reach a total by adding three 1-digit numbers. They use number facts of ten and number doubles to find solutions. Encourage children to work systematically to find all possibilities. They may wish to use counters and ten-frames, part-whole models or jottings to investigate different solutions.

What total are we aiming for?

How many numbers can we add?

Can we use 12 as a number?

Why not?

Can number facts of ten or number doubles help you?

What calculation will you start with?

Can you make a small change to make your next calculation?

How do you know you have found all the ways?

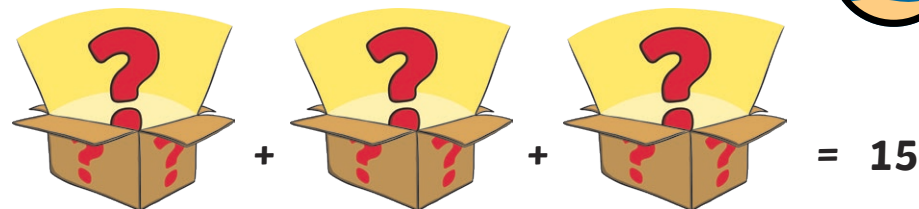
Can you check you have not written the same one twice?

Can you explain how you worked systematically?

Is $6 + 4 + 5$ different to $4 + 5 + 6$?

Why not?

Add Three 1-Digit Numbers



$$\square + \square + \square = 15$$

Each box has a number between 1 and 9 inside.
The three numbers make a total of 15.

What could they be?

How many possibilities can you find?



Add Three 1-Digit Numbers

To add three 1-digit numbers.



Find a number fact of ten. Then, add the other number.

$$\begin{array}{c} 1 + 9 + 3 = \square \\ \diagdown \quad \diagup \\ 10 + \square = \square \end{array}$$

$$\begin{array}{c} 5 + 6 + 5 = \square \\ \diagdown \quad \diagup \\ 10 + \square = \square \end{array}$$



$$4 + 7 + 3 = \square$$

$$6 + 4 + 8 = \square$$

Find a number double and then add the other number.

$$\begin{array}{c} 3 + 3 + 4 = \square \\ \diagdown \quad \diagup \\ \square + \square = \square \end{array}$$



$$\begin{array}{c} 7 + 6 + 6 = \square \\ \diagdown \quad \diagup \\ \square + \square = \square \end{array}$$

$$4 + 7 + 4 = \square$$

$$8 + 8 + 1 = \square$$

Find number facts of ten or doubles and then add the other number.

$$4 + 7 + 7 = \square$$

$$8 + 2 + 5 = \square$$

$$6 + 9 + 4 = \square$$

$$9 + 9 + 2 = \square$$

Add Three 1-Digit Numbers

To add three 1-digit numbers.



Find a number fact of ten and then add the other number.

$3 + 8 + 7 = \square$

$7 + 6 + 4 = \square$



Make a number fact of ten and then add the other numbers.

$5 + 9 + 3 = \square$

$8 + 5 + 6 = \square$



Find a number double and then add the other number.

$8 + 4 + 8 = \square$

$5 + 7 + 7 = \square$

Make a number double and then add the other numbers.

$8 + 9 + 3 = \square$

$6 + 8 + 5 = \square$

How will you solve these calculations?

$7 + 5 + 4 = \square$

$4 + 7 + 8 = \square$



Add Three 1-Digit Numbers **Answers**

$$\begin{array}{c} 3 + 8 + 7 = 18 \\ \diagdown \quad \diagup \\ 10 + 8 = 18 \end{array}$$

$$\begin{array}{c} 7 + 6 + 4 = 17 \\ \diagdown \quad \diagup \\ 7 + 10 = 17 \end{array}$$

$$\begin{array}{c} 5 + 9 + 3 = 17 \\ \diagdown \quad \diagup \\ 5 + 4 \\ 10 + 7 = 17 \end{array}$$

$$\begin{array}{c} 8 + 5 + 6 = 19 \\ \diagdown \quad \diagup \\ 2 + 3 \\ 10 + 9 = 19 \end{array}$$

Children may instead choose to make the number fact $3 + 7$ or $9 + 1$.

Children may instead choose to make the number fact $5 + 5$ or $6 + 4$.

$$\begin{array}{c} 8 + 4 + 8 = 20 \\ \diagdown \quad \diagup \\ 16 + 4 = 20 \end{array}$$

$$\begin{array}{c} 5 + 7 + 7 = 19 \\ \diagdown \quad \diagup \\ 5 + 14 = 19 \end{array}$$

$$\begin{array}{c} 8 + 9 + 3 = 20 \\ \diagdown \quad \diagup \\ 8 + 1 \\ 16 + 4 = 20 \end{array}$$

$$\begin{array}{c} 6 + 8 + 5 = 19 \\ \diagdown \quad \diagup \\ 6 + 2 \\ 12 + 7 = 19 \end{array}$$

Children may instead choose to make double three.

Children may instead choose to make double five.

$$\begin{array}{c} 7 + 5 + 4 = 16 \\ \diagdown \quad \diagup \\ 3 + 2 \\ 10 + 6 = 16 \end{array}$$

$$\begin{array}{c} 4 + 7 + 8 = 19 \\ \diagdown \quad \diagup \\ 4 + 3 \\ 8 + 11 = 19 \end{array}$$

Children may instead choose to make $5 + 5$, $4 + 6$ or $4 + 4$.

Children may instead choose to make $4 + 6$, $7 + 7$, $7 + 3$ or $8 + 2$.

Add Three 1-Digit Numbers

To add three 1-digit numbers.



Work with a partner and discuss the best ways to add these numbers.

Can you spot how to make any number facts of ten or doubles?

$1 + 7 + 9 = \square$

$5 + 8 + 2 = \square$



$4 + 8 + 3 = \square$

$2 + 6 + 5 = \square$



$7 + 4 + 7 = \square$

$3 + 8 + 8 = \square$

$4 + 5 + 3 = \square$

$5 + 9 + 4 = \square$

$2 + 7 + 4 = \square$

$7 + 8 + 5 = \square$



Add Three 1-Digit Numbers **Answers**

$$\begin{array}{c} 1 + 7 + 9 = 17 \\ \diagdown \quad \diagup \\ 10 + 7 = 17 \end{array}$$

$$\begin{array}{c} 5 + 8 + 2 = 15 \\ \quad \diagdown \quad \diagup \\ 5 + 10 = 15 \end{array}$$

$$\begin{array}{c} 4 + 8 + 3 = 15 \\ \quad \diagdown \quad \diagup \\ 6 + 2 \\ 10 + 5 = 15 \end{array}$$

$$\begin{array}{c} 2 + 6 + 5 = 13 \\ \quad \diagdown \quad \diagup \\ 1 + 5 \\ 3 + 10 = 13 \end{array}$$

Children may instead choose to make $4 + 4$, $8 + 2$, $3 + 7$ or $3 + 3$.

Children may instead choose to make $2 + 2$ or $6 + 4$.

$$\begin{array}{c} 7 + 4 + 7 = 18 \\ \diagdown \quad \diagup \\ 14 + 4 = 18 \end{array}$$

$$\begin{array}{c} 3 + 8 + 8 = 19 \\ \quad \diagdown \quad \diagup \\ 3 + 16 = 19 \end{array}$$

$$\begin{array}{c} 4 + 5 + 3 = 12 \\ \quad \diagdown \quad \diagup \\ 4 + 1 \\ 8 + 4 = 12 \end{array}$$

$$\begin{array}{c} 5 + 9 + 4 = 18 \\ \quad \diagdown \quad \diagup \\ 5 + 4 \\ 10 + 8 = 18 \end{array}$$

Children may instead choose to make double three.

Children may instead choose to make $9 + 1$ or $4 + 6$.

$$\begin{array}{c} 2 + 7 + 4 = 13 \\ \quad \diagdown \quad \diagup \\ 2 + 5 \\ 4 + 9 = 13 \end{array}$$

$$\begin{array}{c} 7 + 8 + 5 = 20 \\ \quad \diagdown \quad \diagup \\ 2 + 5 \\ 14 + 6 = 20 \end{array}$$

Children may instead choose to make $7 + 3$, $4 + 4$ or $4 + 6$.

Children may instead choose to make $7 + 3$, $8 + 2$ or $5 + 5$.



$$\textcircled{2} + 4 + \textcircled{8} = \textcircled{14}$$

$$\textcircled{3} + \textcircled{3} + 6 = \textcircled{12}$$

$$6 + \textcircled{1} + \textcircled{9} = \textcircled{16}$$

$$\textcircled{5} + 0 + \textcircled{5} = \textcircled{10}$$

$$9 + \textcircled{4} + \textcircled{4} = \textcircled{17}$$

$$\textcircled{7} + \textcircled{3} + 2 = \textcircled{12}$$

$$\textcircled{6} + 8 + \textcircled{6} = \textcircled{20}$$

$$\textcircled{2} + \textcircled{8} + 8 = \textcircled{18} \text{ or } 2 + \textcircled{8} + \textcircled{8} = \textcircled{18}$$

$$0 + \textcircled{4} + \textcircled{6} = \textcircled{10}$$

$$\textcircled{7} + 5 + \textcircled{7} = \textcircled{19}$$



$$8 + 8 + 4 = 20$$

$$8 + 8 = 16$$

$$16 + 4 = 20$$

True

$$3 + 9 + 3 = 16$$

$$3 + 3 = 6$$

$$6 + 9 = 15$$

False

$$9 + 5 + 5 = 19$$

$$5 + 5 = 10$$

$$10 + 9 = 19$$

True

$$6 + 3 + 4 = 13$$

$$6 + 4 = 10$$

$$10 + 3 = 13$$

True

$$4 + 4 + 7 = 14$$

$$4 + 4 = 8$$

$$8 + 7 = 15$$

False

$$4 + 6 + 6 = 16$$

$$6 + 4 = 10$$

$$10 + 6 = 16$$

True

$$9 + 7 + 1 = 18$$

$$9 + 1 = 10$$

$$10 + 7 = 17$$

False

$$9 + 2 + 9 = 20$$

$$9 + 9 = 18$$

$$18 + 2 = 20$$

True

$$7 + 8 + 4 = 19$$

$$8 + 2 = 10$$

$$7 + 2 = 9$$

$$10 + 9 = 19$$

True

$$5 + 6 + 3 = 14$$

$$5 + 5 = 10$$

$$1 + 3 = 4$$

$$10 + 4 = 14$$

True

**Using number facts of 10:**

$$1 + 9 + 5 = 15$$

$$2 + 8 + 5 = 15$$

$$3 + 7 + 5 = 15$$

$$4 + 6 + 5 = 15^*$$

$$5 + 5 + 5 = 15^*$$

Using number doubles:

$$3 + 3 + 9 = 15$$

$$4 + 4 + 7 = 15$$

$$5 + 5 + 5 = 15^*$$

$$6 + 6 + 3 = 15$$

$$7 + 7 + 1 = 15$$

Starting with smallest value first:

$$1 + 6 + 8 = 15$$

$$2 + 4 + 9 = 15$$

$$2 + 6 + 7 = 15$$

$$3 + 4 + 8 = 15$$

$$4 + 5 + 6 = 15^*$$

*** shows calculations that appear twice that can be derived using different methods. Children should identify that these calculations are the same and therefore should only appear once in their list.**