

Diving into Mastery - Diving

Adult Guidance with Question Prompts

Children learn that addition is commutative and can be written in any order, including the position of the equals sign.

What number shapes can you see?

What is the total if we add two and five?

How could you write it as a calculation?

What is missing from each of these calculations?

Which number represents the whole shape?

Which numbers are parts of the shape?

What addition calculation could you write using these numbers?

Could we write $1 + 9 = 8$?

Why not?

Have you written four different calculations?

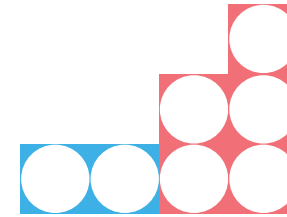
How are they different?

How are they the same?

Addition Fact Families



Complete the calculations to match these number shapes.



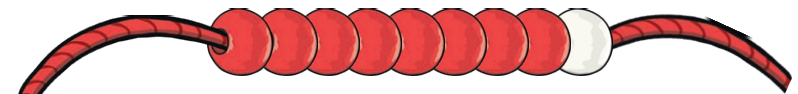
$$2 + \underline{\quad} = 7$$

$$\underline{\quad} + 2 = 7$$

$$7 = \underline{\quad} + \underline{\quad}$$

$$\underline{\quad} = 2 + \underline{\quad}$$

Write 4 addition calculations to match the beads on this string.



Diving into Mastery - Deeper

Adult Guidance with Question Prompts

Children spot the mistake in the fact families. They explain why it is wrong and rewrite it correctly.

Look at the fact family. Can you see one that doesn't belong?

Why is it the odd one out?

Can you write what the calculation should have been?

Addition Fact Families



Which is the odd one out in each group of calculations?

$$2 + 3 = 5$$

$$3 + 2 = 5$$

$$3 = 5 + 2$$

$$5 = 2 + 3$$

$$7 + 1 = 8$$

$$8 + 1 = 7$$

$$8 = 1 + 7$$

$$8 = 7 + 1$$

$$2 + 1 = 3$$

$$1 + 2 = 3$$

$$3 = 1 + 2$$

$$1 = 2 + 3$$

$$4 + 10 = 6$$

$$6 + 4 = 10$$

$$10 = 4 + 6$$

$$10 = 6 + 4$$

Can you explain what is wrong and correct the mistakes?

Diving into Mastery - Deepest

Adult Guidance with Question Prompts

Children use their understanding of commutativity to solve a problem.

What do we know?

What do we need to find out?

Could the banana and pineapple both represent three?

Why not?

What could the banana and pineapple represent?

How can we work systematically to find all the possible solutions?

Addition Fact Families



The pineapple and banana each represent a number.

$$\text{Pineapple} + \text{Banana} = 6$$

$$\text{Banana} + \text{Pineapple} = 6$$

$$6 = \text{Banana} + \text{Pineapple}$$

$$6 = \text{Pineapple} + \text{Banana}$$

The banana and pineapple do not represent the same number.

What could the numbers be?

Find all the possible solutions.

Can you make up your own fruit fact family for a friend to solve?