

# Diving into Mastery - Diving

## Adult Guidance with Question Prompts

Children recognise that numbers can be partitioned into two or more parts. They start to use the part-whole model and become fluent in the language of part-part-whole.

What is the whole?

What is each part?

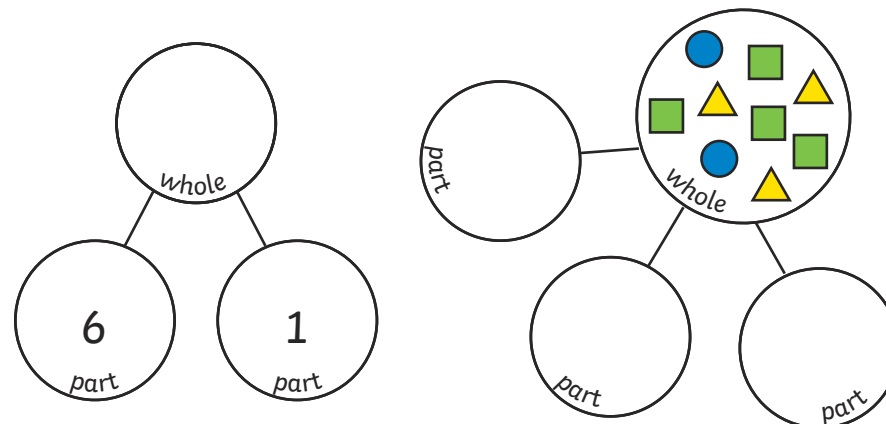
How have the parts been separated?

Can you draw a part-whole model?

## Part-Whole Model

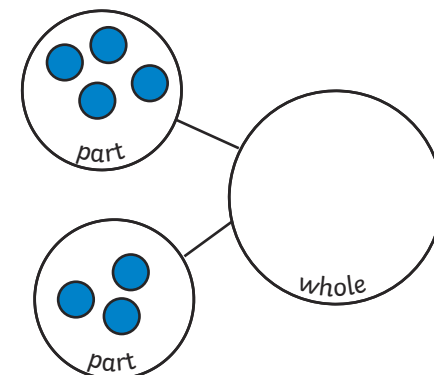


Complete the part-whole models.



Draw a part-whole model where the whole is 9, one part is 4 and one part is 5.

In this part-whole model, the whole is \_\_\_\_\_, one part is \_\_\_\_\_ and one part is \_\_\_\_\_.



# Diving into Mastery - Deeper

## Adult Guidance with Question Prompts

Children will need paper or whiteboards to draw part-whole models.

Is George's statement true or false?

How many different part-whole models can you make?

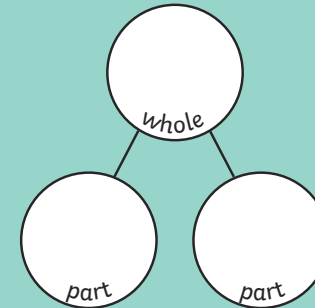
How can we work systematically to find them all?

How can you be sure you haven't missed any out?

Explain how you know.

Can you apply your working out to see if Magda's statement is true or false?

## Part-Whole Model



George



There are 5 ways to complete this part-whole model where the whole is 8.

**Is this true or false?**

Prove it by drawing all the part-whole models where the whole is 8.

Magda



There are 5 ways to complete this part-whole model where the whole is 10.

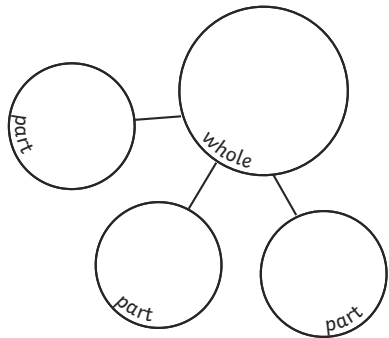
**Is this true or false?**

Prove it by drawing all the part-whole models where the whole is 10.

# Diving into Mastery - Deepest

## Adult Guidance with Question Prompts

Children find all the possible parts for a given whole. Children may need 9 cubes to practically represent the problem. They work systematically using a part-whole model with three parts:



Can you think of a way of partitioning the nine bricks into three groups?

Can you work systematically to find five different ways?

Show me the ways in part-whole models.

Can you think of a number story or problem where the whole is seven?

Example: three children share seven pencils.

What could the parts be?

Show me using part-whole models.

## Part-Whole Model



Ana has 9 building bricks. She gives some to Damian, some to Freya and keeps some for herself.



Find 5 different ways the 9 bricks can be shared between the three children. Draw part-whole models to show the different ways.

Think of your own number story where the whole is 7. What could the parts be?