"Learning is a journey, to be taken together, one step at a time"

Onchan Primary School
School Road, Onchan, Isle of Man IM3 4PD
email: OnchanEnquiries@Sch.im
tel: 01624 673465
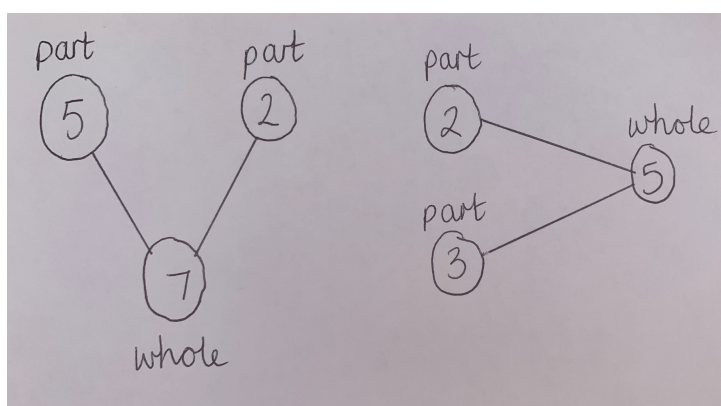
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Part – Whole Models

A part – whole model helps children see the concept of partitioning. It also allows children to develop their understanding that addition and subtraction are related, that addition can be in any order and still give the same answer (5+3 = 8, 3+5 = 8) but subtraction cannot.

This is how FS/KS1 children are most likely to see part-whole models represented in class or in their home learning activities.

Children might be asked to work out a missing part, or the missing whole or create number sentences about the model.

Number sentences that can be formed from the above part- whole model are:

5 + 2 = 7

2 + 5 = 7

7 − 2 = 5

7 − 5 = 2

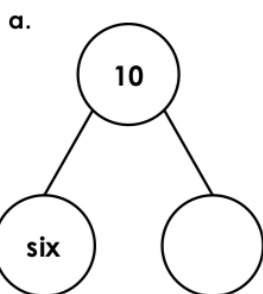Number sentences that can be formed from the above part- whole model are:
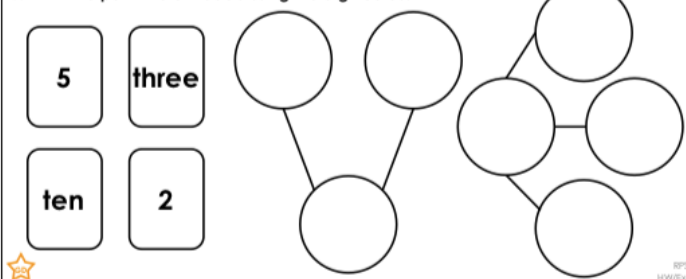
2 + 3 = 5

3 + 2 = 5

5 − 3 = 2

5 − 2 = 3

Examples of the type of questions children might see/use a part-whole model can be found below
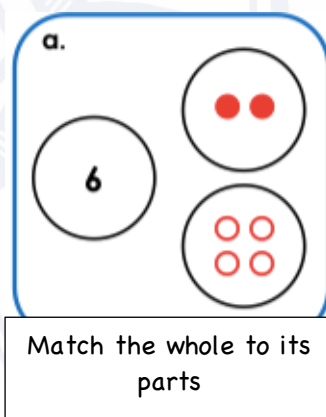
7. Fill in the missing parts.

a.

(Classroom Secrets, 2020)

9. Fill in the part whole models using the digit cards.

a.

Match the whole to its parts
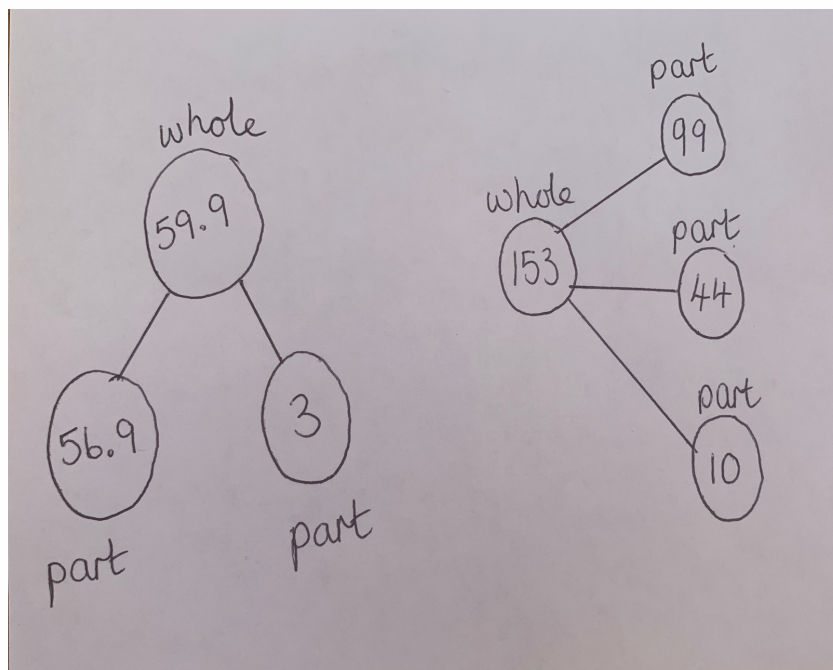
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This is how KS2 children are most likely to see part-whole models represented in class or in their home learning activities.

Children might be asked to work out a missing part, use a part whole diagram to represent a problem or to introduce a new concept.

Partitioning when using decimal numbers can be quite tricky so the model is a good way of visualising it (see below).

Number sentences that can be formed from the above part-whole model are:
$56.9 + 3 = 59.9$
$3 + 56.9 = 59.9$
$59.9 - 3 = 56.9$
$59.9 - 56.9 = 3$

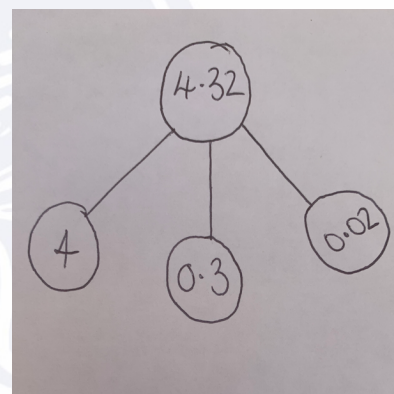| Number sentences that can be formed from the above part- whole model are: |
|---|
| $99 + 44 + 10 = 153$ |
| $10 + 44 + 99 = 153$ |
| $153 - 10 - 99 = 44$ |
| $153 - 44 - 10 = 99$ |

Examples of the type of questions children might see/use a part-whole model can be found below