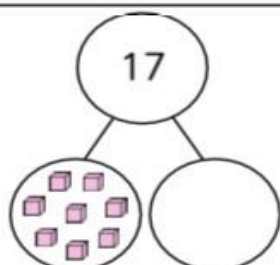


## Related facts – Part whole models



- 1 Complete the part-whole diagrams to help you complete the related facts.

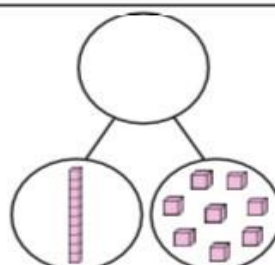


$$\underline{\quad\quad} + \underline{\quad\quad} = 17$$

$$\underline{\quad\quad} + \underline{\quad\quad} = 17$$

$$17 - \underline{\quad\quad} = \underline{\quad\quad}$$

$$17 - \underline{\quad\quad} = \underline{\quad\quad}$$

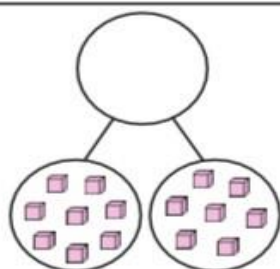


$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

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

$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

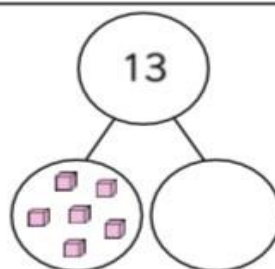


$$\underline{\quad\quad} + \underline{\quad\quad} = 15$$

$$\underline{\quad\quad} + \underline{\quad\quad} = 15$$

$$15 - \underline{\quad\quad} = \underline{\quad\quad}$$

$$15 - \underline{\quad\quad} = \underline{\quad\quad}$$

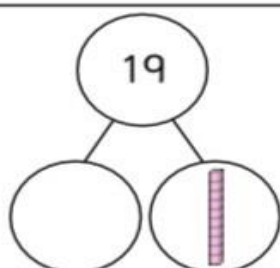


$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

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

$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

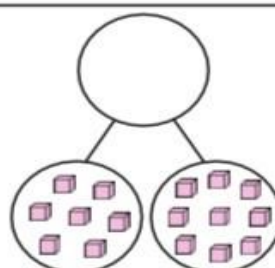


$$\underline{\quad\quad} + \underline{\quad\quad} = 19$$

$$\underline{\quad\quad} + \underline{\quad\quad} = 19$$

$$19 - \underline{\quad\quad} = \underline{\quad\quad}$$

$$19 - \underline{\quad\quad} = \underline{\quad\quad}$$



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

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

$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

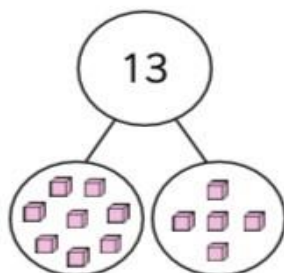
$$\underline{\quad\quad} - \underline{\quad\quad} = \underline{\quad\quad}$$

# Challenge cards



Reason and problem solving cards:

Spot the mistakes.



$$5 + 8 = 13$$

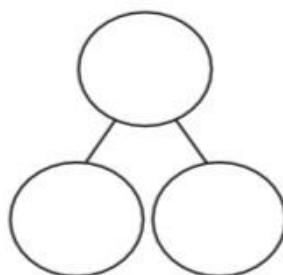
$$6 + 7 = 13$$

$$13 - 5 = 8$$

$$13 - 6 = 7$$

Explain your answer.

Complete the part-whole diagram and stem sentences.



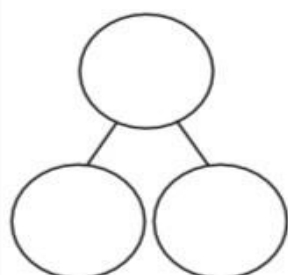
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$15 - 9 = \underline{\quad}$$

Complete the part-whole diagram and stem sentences.



$$8 + 4 = \underline{\quad}$$

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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

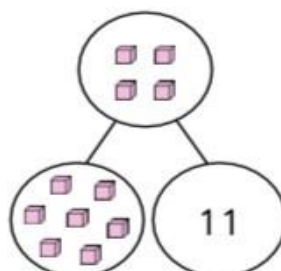
$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

Repeat for  $12 - 7$ .

Can you create your own?



What mistake has been made in the part-whole model?



$$7 + 4 = 11$$

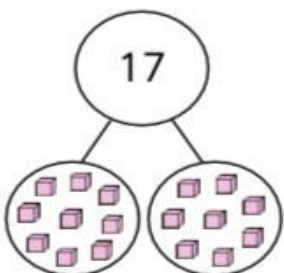
$$4 + 7 = 11$$

$$11 - 4 = 7$$

$$11 - 7 = 4$$



Do my stem sentences represent my part-whole diagram?



$$9 + 8 = 17$$

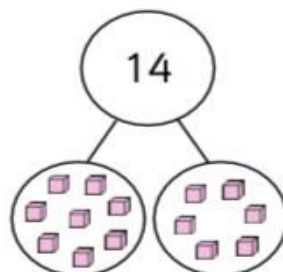
$$8 + 9 = 17$$

$$8 - 9 = 17$$

$$9 - 8 = 17$$

If not, what mistakes have been made?

The part-whole diagram and stem sentences match.



$$8 + 6 = 14$$

$$6 + 8 = 14$$

$$14 - 8 = 6$$

$$14 - 6 = 8$$

True or false?

Explain your answer.