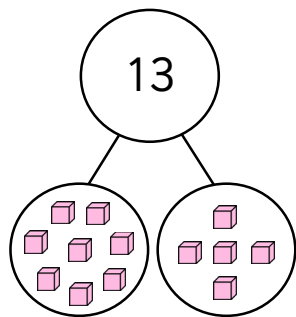


Challenge cards



Reason and problem solving cards:

Spot the mistakes.



$$5 + 8 = 13$$

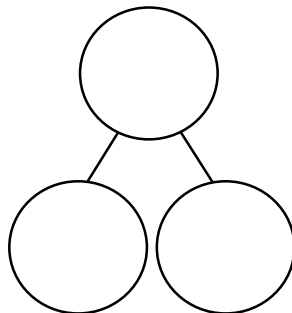
$$6 + 7 = 13$$

$$13 - 5 = 8$$

$$13 - 6 = 7$$

Explain your answer.

Complete the part-whole diagram and stem sentences.



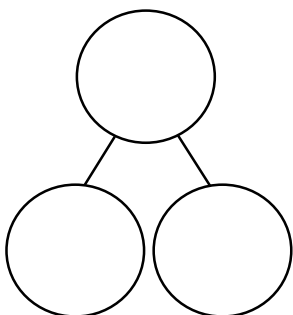
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

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

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

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

Complete the part-whole diagram and stem sentences.



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

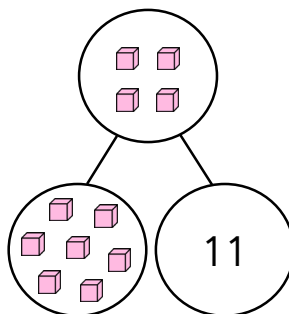
$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

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

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



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



$$7 + 4 = 11$$

$$4 + 7 = 11$$

$$11 - 4 = 7$$

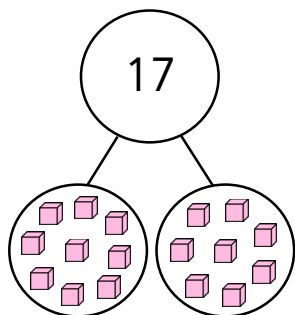
$$11 - 7 = 4$$

Repeat for $12 - 7$.

Can you create your own?



Do my stem sentences represent my part-whole diagram?



$$9 + 8 = 17$$

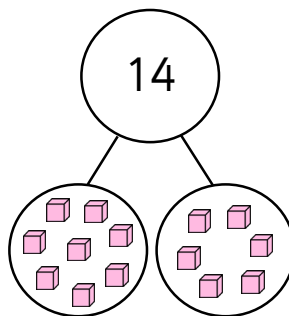
$$8 + 9 = 17$$

$$8 - 9 = 17$$

$$9 - 8 = 17$$

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?

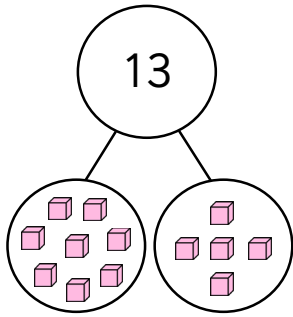
Explain your answer.

Challenge cards



Reason and problem solving cards:

Spot the mistakes.



$$5 + 8 = 13$$

$$6 + 7 = 13$$

$$13 - 5 = 8$$

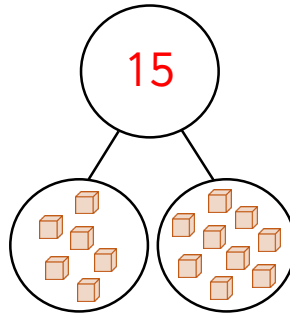
$$13 - 6 = 7$$

The part-whole diagram represents $8 + 5 = 13$.

7 and 6 are not part of the related facts.

Explain your answer.

Complete the part-whole diagram and stem sentences.



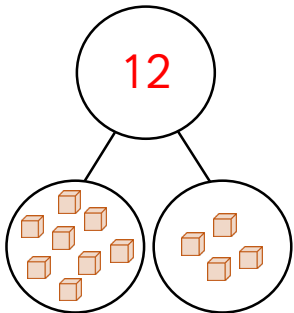
$$\underline{6} + \underline{9} = \underline{15}$$

$$\underline{9} + \underline{6} = \underline{15}$$

$$\underline{15} - \underline{6} = \underline{9}$$

$$15 - 9 = \underline{6}$$

Complete the part-whole diagram and stem sentences.



$$8 + 4 = \underline{12}$$

$$\underline{4} + \underline{8} = \underline{12}$$

$$\underline{12} - \underline{8} = \underline{4}$$

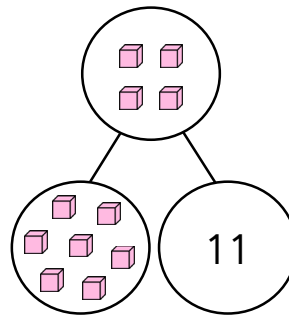
$$\underline{12} - \underline{4} = \underline{8}$$

Repeat for $12 - 7$.

Can you create your own?



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



$$7 + 4 = 11$$

$$4 + 7 = 11$$

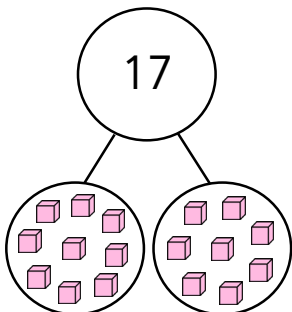
$$11 - 4 = 7$$

$$11 - 7 = 4$$

The blocks are in the wrong parts. The answer 11 should be in the whole part and the blocks in the bottom two parts.



Do my stem sentences represent my part-whole diagram? No



$$9 + 8 = 17$$

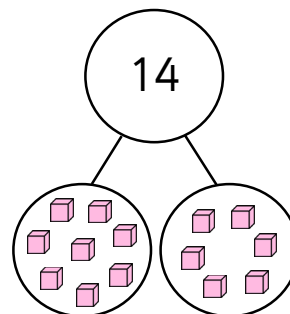
$$8 + 9 = 17$$

$$8 - 9 = 17$$

$$9 - 8 = 17$$

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.

True. There are the correct number of blocks in each part. 8 and 6 make 14.