

# Related facts – Bar models



1 Use the bar models to help you complete the related facts.

18	
10	?

$$10 + \underline{\quad\quad} = \underline{\quad\quad}$$

$$\underline{\quad\quad} + 10 = \underline{\quad\quad}$$

$$\underline{\quad\quad} - 10 = \underline{\quad\quad}$$

$$\underline{\quad\quad} - \underline{\quad\quad} = 10$$

15	
?	8

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

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

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

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

?	
5	7

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

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

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

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

16	
7	?

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

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

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

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

17	
?	9

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

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

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

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

?	
8	5

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

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

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

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

# Challenge Cards – Related facts



Reasoning and problem solving cards:

Use the numbers to create a bar model.



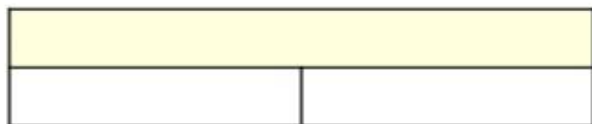
List the related facts:

$$\begin{array}{rcl} \_\_\_ + \_\_\_ & = & \_\_\_ \\ \_\_\_ + \_\_\_ & = & \_\_\_ \\ \_\_\_ - \_\_\_ & = & \_\_\_ \\ \_\_\_ - \_\_\_ & = & \_\_\_ \end{array}$$

Colour the incorrect calculations.

$8 + 9 = 17$	$8 - 9 = 17$	$9 + 8 = 17$
$9 - 8 = 17$	$17 - 9 = 8$	$17 + 8 = 9$

Now, draw a bar model to represent the **correct** calculations.



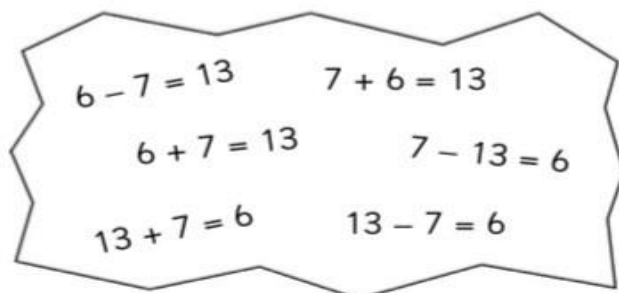
Use the number frames to create a bar model.



List the related facts:

$$\begin{array}{rcl} \_\_\_ + \_\_\_ & = & \_\_\_ \\ \_\_\_ + \_\_\_ & = & \_\_\_ \\ \_\_\_ - \_\_\_ & = & \_\_\_ \\ \_\_\_ - \_\_\_ & = & \_\_\_ \end{array}$$

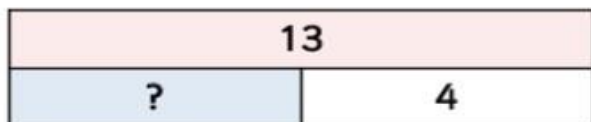
Circle the incorrect calculations.



Represent the **correct** calculations on a bar model and part-whole diagram.



The missing number is 17.

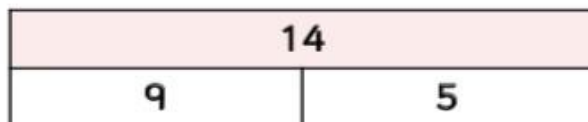


Is Jack correct?

If not, what mistake might Jack have made and what is the correct answer?



The bar model shows  $9 - 5 = 14$



True or false? Explain your answer. What other related facts can you find?