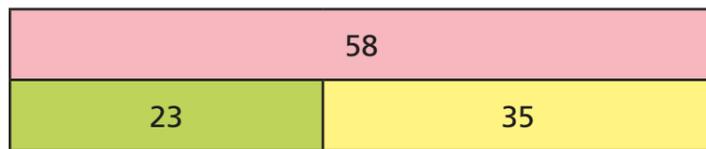


# Properties of addition and subtraction

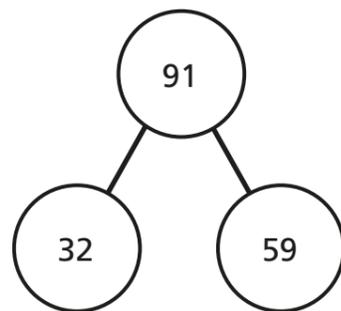
1 Which calculations are represented by the bar model? Tick your answers.



$23 + 35 = 58$         $58 + 35 = 23$         $58 = 35 + 23$

$23 - 35 = 58$         $58 - 35 = 23$         $23 = 58 - 35$

2 Write two additions and two subtractions represented by the part-whole model.



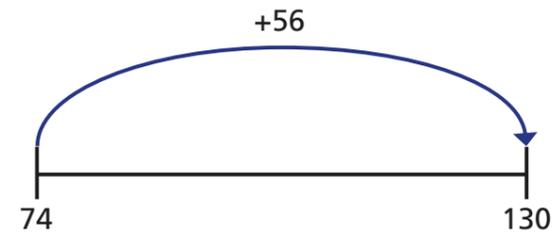
+  =

+  =

-  =

-  =

3 Complete the additions and subtractions represented by the number line.



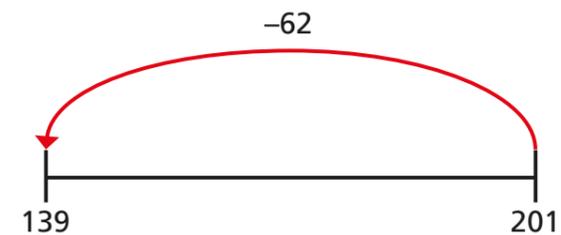
$74 + \square = \square$

$56 + \square = \square$

$130 - \square = 56$

-  = 74

4 Complete the additions and subtractions represented by the number line.



+  =

+  =

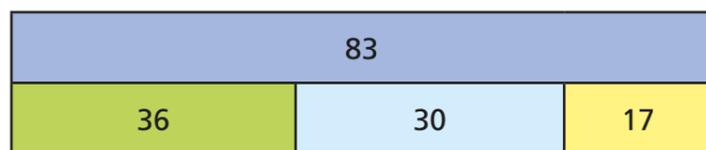
$201 - \square = 139$

-  = 62

5 Draw a bar model, part-whole model and number line to represent the calculation  $114 - 56 = 58$



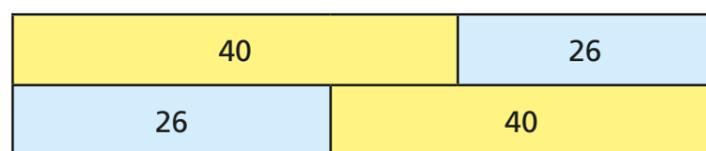
- 6 Which calculations are represented by the bar model? Tick your answers.



$83 = 36 + 30 + 17$       $17 + 30 + 36 = 83$       $83 - 17 = 30 - 36$

$83 - 36 = 30 + 17$       $30 + 36 = 17 - 83$       $83 - 17 - 30 = 36$

7



This bar model shows that addition is commutative.

Explain what Dexter means.

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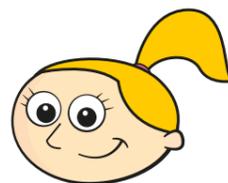
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8

I know  $60 - 14 = 46$ , so that means  $14 - 60 = 46$ , too.



Explain why Eva is wrong.

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- 9 Nijah works out  $57 + 64 + 43$  like this:

$$\begin{aligned} 57 + 64 + 43 &= 57 + 43 + 64 \\ &= 100 + 64 \\ &= 164 \end{aligned}$$

- a) Why did Nijah change the order of the numbers before adding them?

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- b) Write each of these additions in another order to make them easier. You do not need to work out the answers.

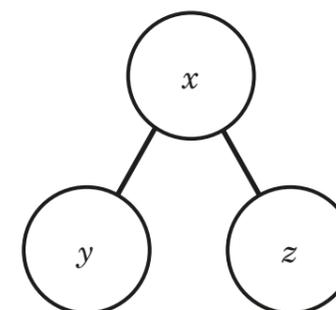
$6 + 9 + 2 + 1 + 4$

$38 + 27 + 62$

$26 + 31 + 74 + 29$

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- 10 Write two additions and two subtractions represented by the part-whole model.



<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	+	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	-	<input type="text"/>	=	<input type="text"/>

- 11 Show that these statements are always true.

$a + b + c = a + c + b$

$a + b + c = c + a + b$