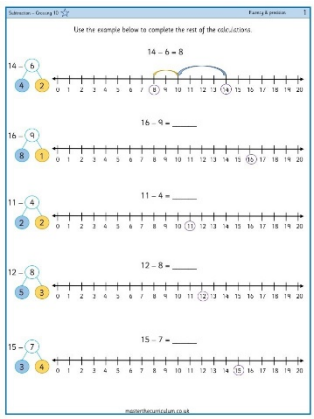
Lesson 11 – Number – Subtraction - Crossing 10

NC Objective:	Resources needed:	Vocabulary:
Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. Add and subtract one-digit and two-digit numbers to 20, including zero.	Practical equipment for children to use to count in hundreds, tens and ones. Base 10 recommended so children can see the visual difference. Differentiated Sheets. Teaching Slides.	Subtraction, ten, number lines.

For the first time, children will be introduced to subtraction where they have to cross ten. This small step focuses on the strategy of partitioning to make ten.
Children should represent this using concrete manipulatives or pictorially to begin with. Ten frames and number lines are particularly useful to model the structure of this strategy.
Children will move towards using this as a mental strategy.

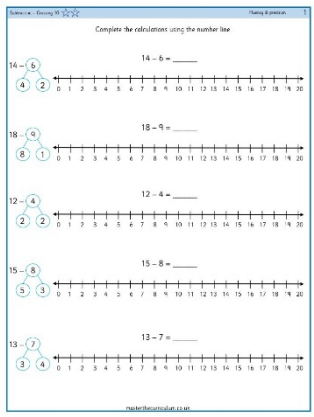
Key questions:
How can you partition a number to help you subtract?
How does using the counters help you to see this strategy?
How does using a number line help you to see this strategy?
Can you think of another way to represent this problem?

★ Working Towards



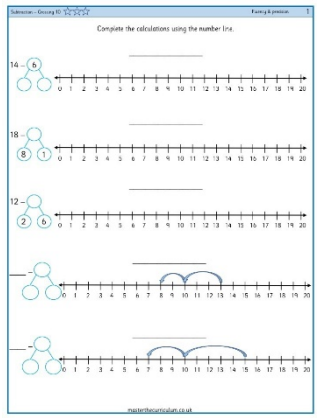
On this sheet, children have an example to follow and the number they need to start from are circled. They have the numbers already partitioned.

★★ Working Within



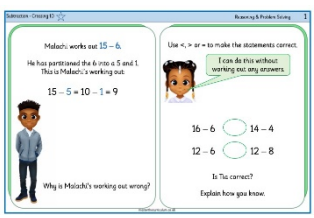
On this sheet, children understand where to start from on the number line. They use the already partitioned number to show how to cross 10 on the number line.

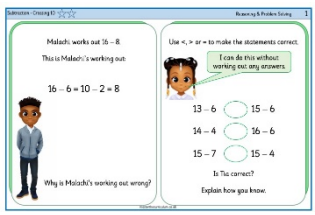
★★★ Greater Depth

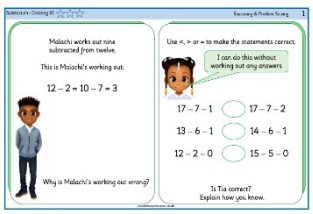


On this sheet, children have incomplete questions and will use the clues shown to be able to complete the question and write the number sentence.

Reasoning & Problem Solving

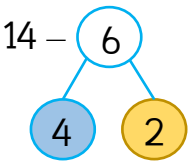


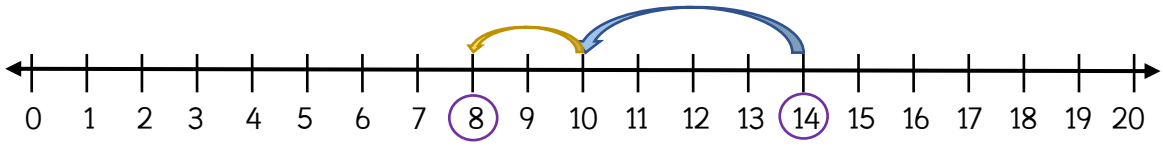




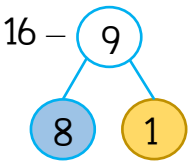
Use the example below to complete the rest of the calculations.

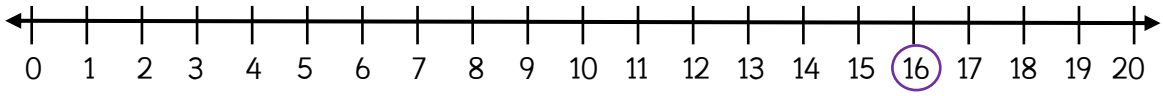
14 – 6 = 8



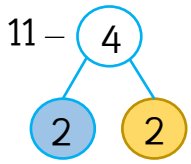


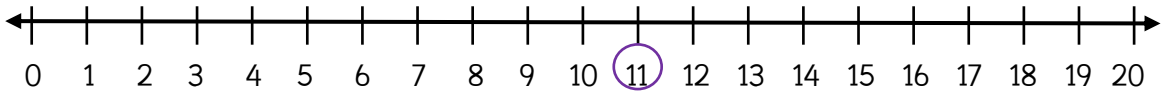
16 – 9 = _____





11 – 4 = _____





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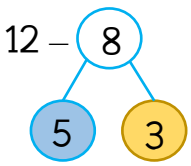
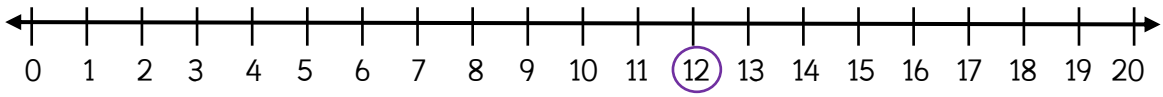
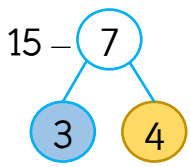
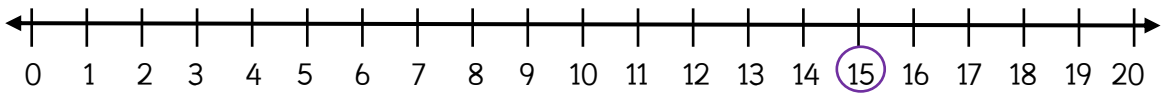




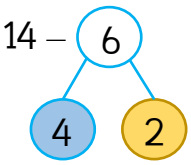
15 – 7 = _____

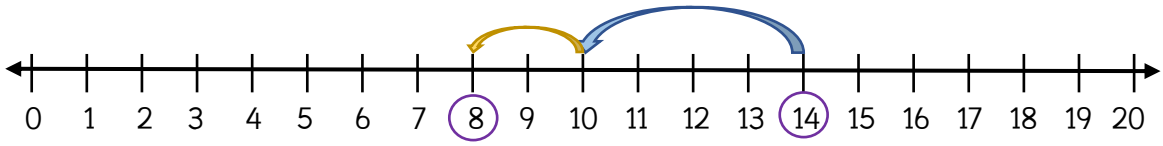




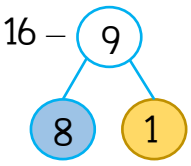
Use the example below to complete the rest of the calculations.

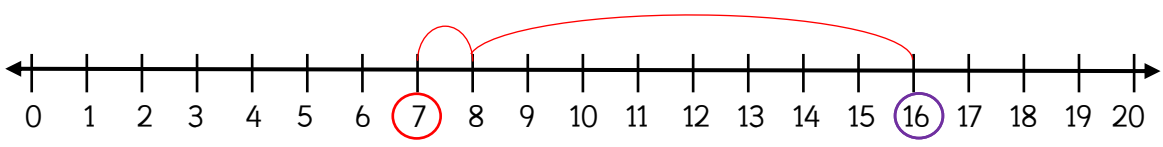
14 – 6 = 8





16 – 9 = 7





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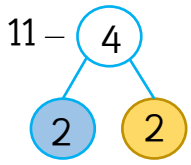

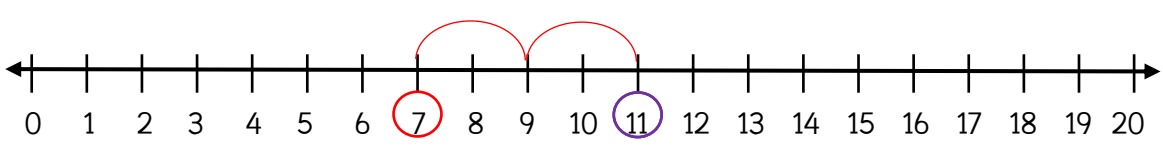

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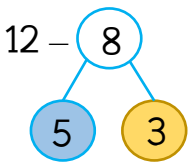

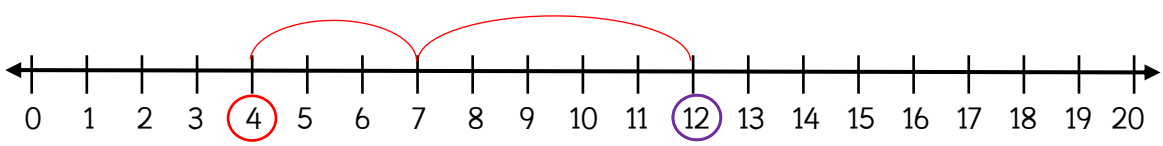

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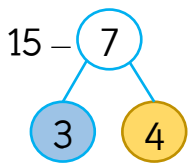
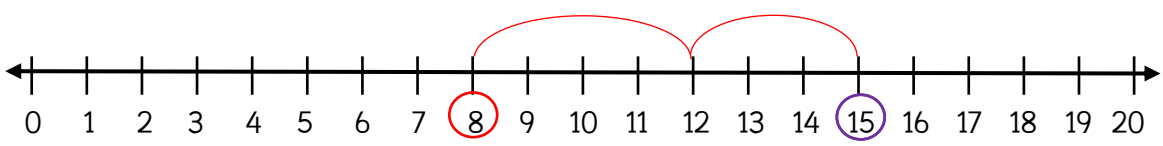
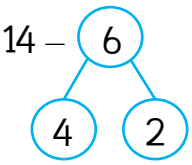
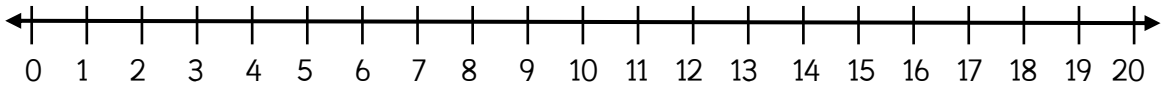




Complete the calculations using the number line.

14 – 6 = _____





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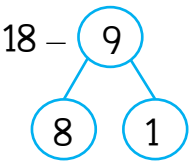

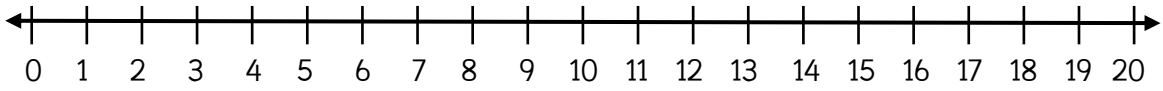

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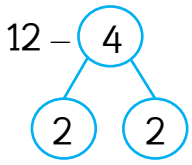

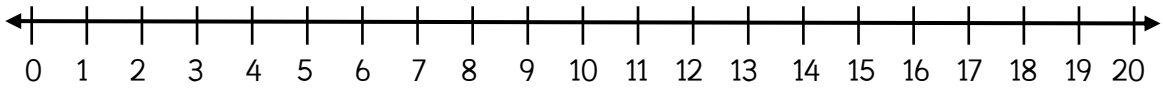

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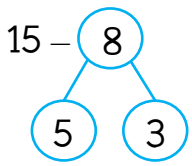

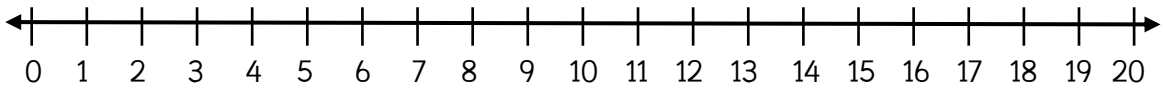

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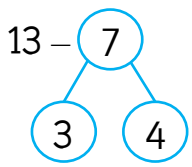
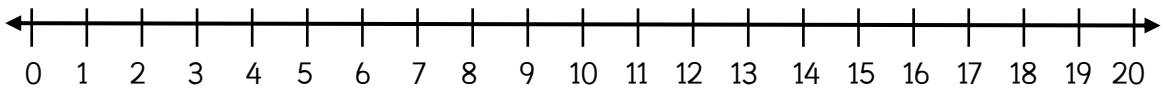
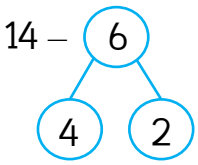
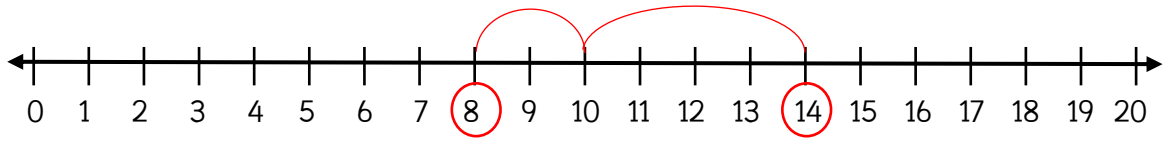




Complete the calculations using the number line.

14 – 6 = 8





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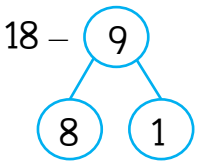

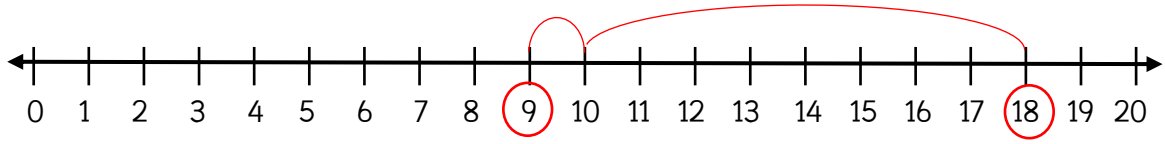

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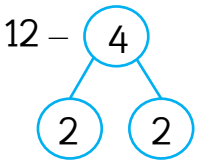

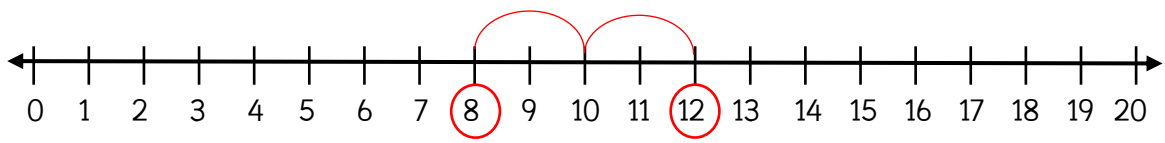

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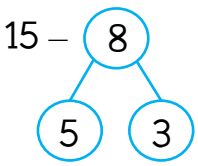

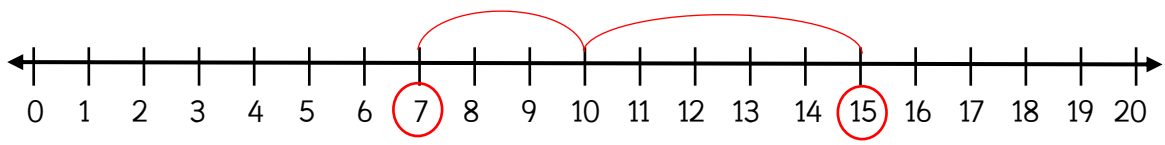

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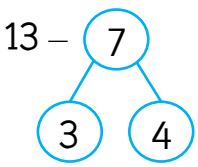
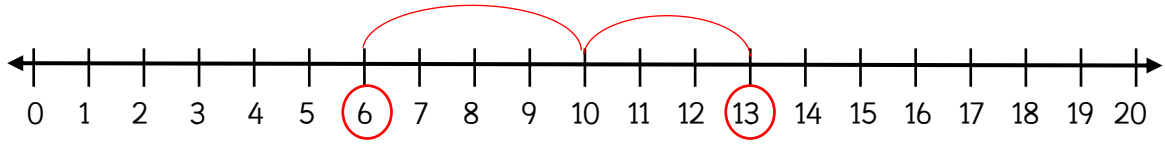
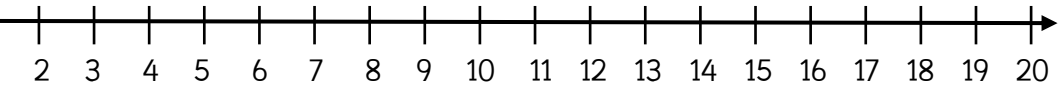




Complete the calculations using the number line.

14 – 6 = _____



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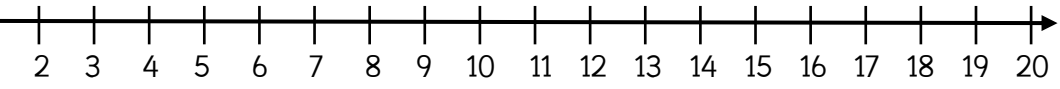

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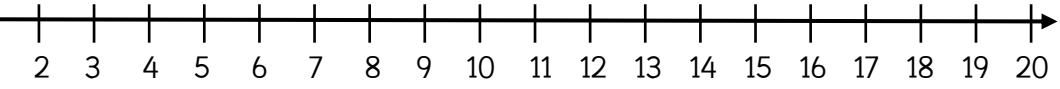

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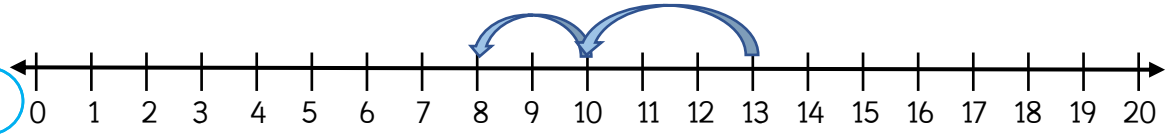

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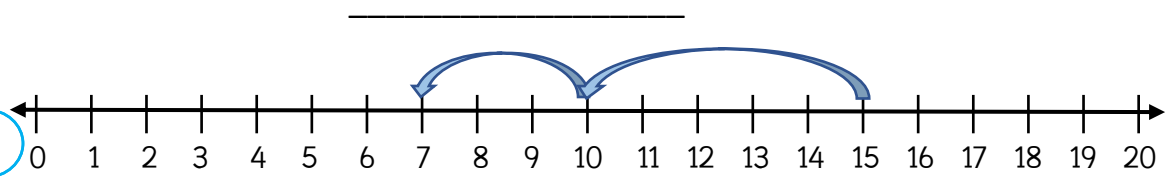
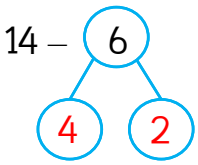
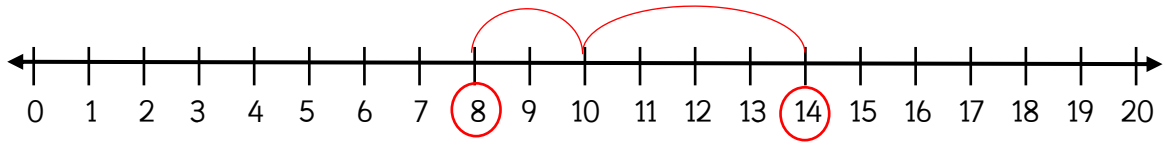


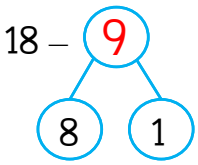
Complete the calculations using the number line.

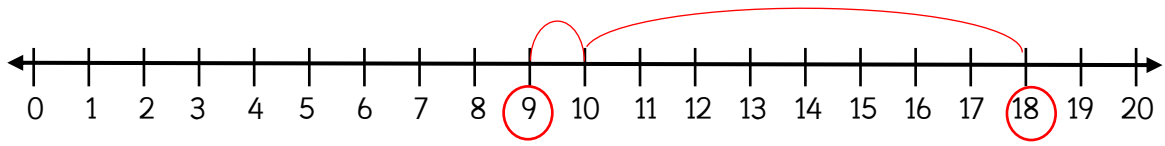
14 – 6 = 8



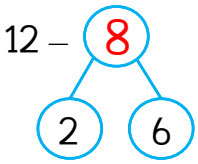


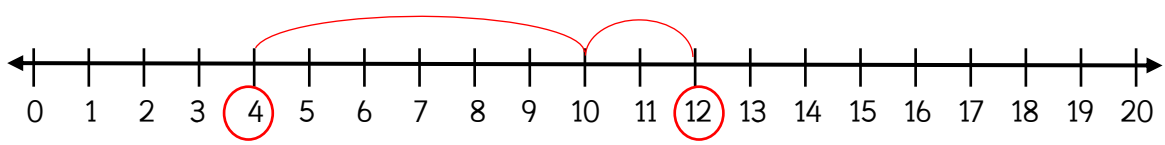
18 – 9 = 9



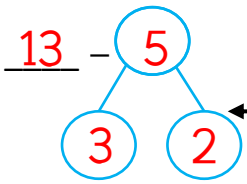


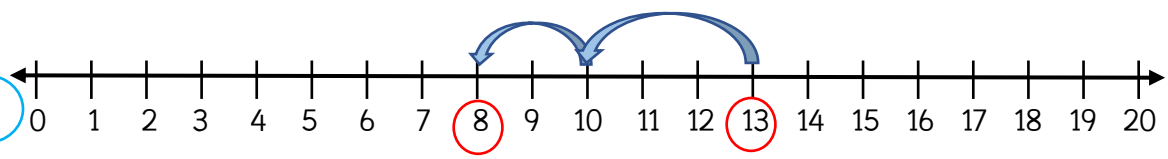
12 – 8 = 4



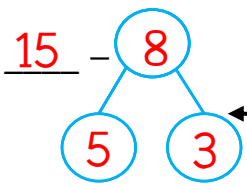


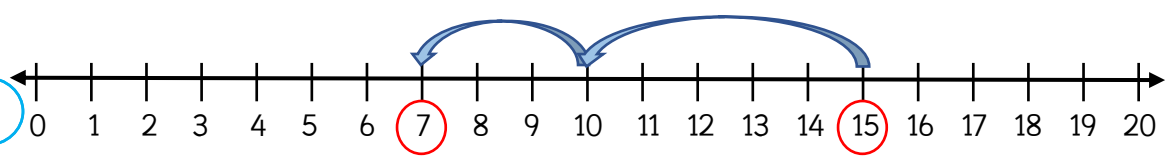
13 – 5 = 8





15 – 8 = 7





Malachi works out $15 - 6$.

He has partitioned the 6 into a 5 and 1.
This is Malachi's working out:

$$15 - 5 = 10 - 1 = 9$$

Why is Malachi's working out wrong?

Use <, > or = to make the statements correct.

I can do this without working out any answers.

$16 - 6$ ◯ $14 - 4$

$12 - 6$ ◯ $12 - 8$

Is Tia correct?

Explain how you know.

Subtraction - Crossing 10 ☆ Reasoning & Problem Solving 1

Malachi works out $15 - 6$.

He has partitioned the 6 into a 5 and 1.
This is Malachi's working out:

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$16 - 6$ ◯ $14 - 4$

$12 - 6$ ◯ $12 - 8$

Is Tia correct?

Explain how you know.

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Answers

Malachi works out **15 – 6.**

He has partitioned the 6 into a 5 and 1.
This is Malachi's working out:

15 – 5 = 10 – 1 = 9

Why is Malachi's working out wrong?

Malachi has used the = sign incorrectly.
10 – 1 is not equal to 15 – 5.
He should have written: 15 – 5 = 10
and 10 – 1 = 9.

Use <, > or = to make the statements correct.

10   10
16 – 6   =   14 – 4

6   9
12 – 6   <   15 – 6

Tia is correct.

1. The ones are the same on the calculation – the numbers will equal.
2. 6 is being taken away from both calculations. 12 is smaller than 15, so the first calculation will be smaller.

Subtraction - Crossing 10 ☆ Reasoning & Problem Solving 1

Answers

Malachi works out 15 – 6.

He has partitioned the 6 into a 5 and 1.
This is Malachi's working out:

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Use <, > or = to make the statements correct.

10   10
16 – 6   =   14 – 4

6   9
12 – 6   <   15 – 6

Tia is correct.

1. The ones are the same on the calculation – the numbers will equal.
2. 6 is being taken away from both calculations. 12 is smaller than 15, so the first calculation will be smaller.

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Malachi works out 16 – 8.

This is Malachi's working out:

$$16 - 6 = 10 - 2 = 8$$

Why is Malachi's working out wrong?

Use <, > or = to make the statements correct.

13 – 6 ◯ 15 – 6

14 – 4 ◯ 16 – 6

15 – 7 ◯ 15 – 4

Is Tia correct?

Explain how you know.

Subtraction - Crossing 10 ☆☆ Reasoning & Problem Solving 1

Malachi works out 14 – 6.

This is Malachi's working out:

$$16 - 6 = 10 - 2 = 8$$

Why is Malachi's working out wrong?

Use <, > or = to make the statements correct.

13 – 6 ◯ 15 – 6

14 – 4 ◯ 16 – 6

15 – 7 ◯ 15 – 4

Is Tia correct?

Explain how you know.

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Malachi works out 16 – 8.

This is Malachi's working out:

$$16 - 6 = 10 - 2 = 8$$

Why is Malachi's working out wrong?

Malachi has used the = sign incorrectly.
10 – 2 is not equal to 16 – 6.
He should have written: 16 – 6 = 10
and 10 – 2 = 8.

Use <, > or = to make the statements correct.

13 – 6 < 15 – 6

14 – 4 = 16 – 6

15 – 7 < 15 – 4

Tia is correct.

1. The number that is being taken away is the same, so we know that the one with 13 will always be less as 13 is less than 15.
2. The ones are the same on the calculation – the numbers will equal 10.
3. The first number is the same on both calculations. So we know that 15 – 7 will be smaller than 15 – 4 .

Subtraction - Crossing 10 ☆☆ Answers Reasoning & Problem Solving 1

Malachi works out 14 – 6.

This is Malachi's working out:

$$16 - 6 = 10 - 2 = 8$$

Why is Malachi's working out wrong?

Malachi has used the = sign incorrectly.
10 – 2 is not equal to 16 – 6.
He should have written: 16 – 6 = 10
and 10 – 2 = 8.

Use <, > or = to make the statements correct.

13 – 6 < 15 – 6

14 – 4 = 16 – 6

15 – 7 < 15 – 4

Tia is correct.

1. The number that is being taken away is the same, so we know that the one with 13 will always be less as 13 is less than 15.
2. The ones are the same on the calculation – the numbers will equal 10.
3. The first number is the same on both calculations. So we know that 15 – 7 will be smaller than 15 – 4 .

Malachi works out nine subtracted from twelve.

This is Malachi's working out:

$$12 - 2 = 10 - 7 = 3$$

Why is Malachi's working out wrong?

Use <, > or = to make the statements correct.

I can do this without working out any answers.

$17 - 7 - 1$	◯	$17 - 7 - 2$
$13 - 6 - 1$	◯	$14 - 6 - 1$
$12 - 2 - 0$	◯	$15 - 5 - 0$

Is Tia correct?
Explain how you know.

Subtraction - Crossing 10 ☆☆☆ Reasoning & Problem Solving 1

Malachi works out nine subtracted from twelve.

This is Malachi's working out:

$$12 - 2 = 10 - 7 = 3$$

Why is Malachi's working out wrong?

Use <, > or = to make the statements correct.

I can do this without working out any answers.

$17 - 7 - 1$	◯	$17 - 7 - 2$
$13 - 6 - 1$	◯	$14 - 6 - 1$
$12 - 2 - 0$	◯	$15 - 5 - 0$

Is Tia correct?
Explain how you know.

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Malachi works out nine subtracted from twelve.

This is Malachi's working out:

$$12 - 2 = 10 - 7 = 3$$

Why is Malachi's working out wrong?

Malachi has used the = sign incorrectly.
10 – 7 is not equal to 12 – 2.
He should have written: 12 – 2 = 10 and 10 – 7 = 3.

Use <, > or = to make the statements correct.

17 – 7 – 1	>	17 – 7 – 2
13 – 6 – 1	<	14 – 6 – 1
12 – 2 – 0	=	15 – 5 – 0

Tia is correct.
1. The number that is being taken away from is the same (17).
2. Both calculations are subtracting 7 (6 -1)
3. Both calculations are taking away the amount of ones the first number has, so it will be equal.

Subtraction - Crossing 10 ☆☆☆ Answers Reasoning & Problem Solving 1

Malachi works out nine subtracted from twelve.

This is Malachi's working out:

$$12 - 2 = 10 - 7 = 3$$

Why is Malachi's working out wrong?

Malachi has used the = sign incorrectly.
10 – 7 is not equal to 12 – 2.
He should have written: 12 – 2 = 10 and 10 – 7 = 3.

Use <, > or = to make the statements correct.

17 – 7 – 1	>	17 – 7 – 2
13 – 6 – 1	<	14 – 6 – 1
12 – 2 – 0	=	15 – 5 – 0

Tia is correct.
1. The number that is being taken away from is the same (17).
2. Both calculations are subtracting 7 (6 -1)
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