Year 2
Home Learning
Maths Week 3

W/C Monday 20th April

Missing Number Problems

Each day choose a warm up activity from here to wake up your brain!

https://www.topmarks.co.uk/maths-games/daily10

Lesson 1
Addition missing number sentences where the first number is missing.

LO: I am learning to find a missing number using the inverse.

What can you remember about the inverse?

What does it mean?

What would be the inverse of these?

3 + 7 = 10

8 + 2 = 10

6 + 4 = 10

LO: I am learning to find a missing number using the inverse.

The inverse means the opposite. The opposite of addition is subtraction. The opposite of subtraction is addition.

Answers

3 + 7 = 10 → 10 – 3 = 7 or 10 – 7 = 3

8 + 2 = 10 → 10 – 8 = 2 or 10 – 2 = 8

6 + 4 = 10 → 10 – 6 = 4 or 10 – 4 = 6

LO: I am learning to find a missing number using the inverse.

When we have a missing number in a number sentence we can use the inverse to help work out what the missing number is.

Today we will look at addition number sentences where the number missing is the first number in the number sentences.

For example: ? + 8 = 12

LO: I am learning to find a missing number using the inverse.

? + 8 = 12

To work this out first we need to identify the operation.

Is it…?

Addition +

Subtraction −

Multiplication x

Division ÷

LO: I am learning to find a missing number using the inverse.

? + 8 = 12

To work this out first we need to identify the operation.

It is…

Addition +

Subtraction −

Multiplication x

Division ÷

LO: I am learning to find a missing number using the inverse.

? + 8 = 12

So we know that we need to use the opposite operation to solve it. What is the opposite of addition?

Is it…?

Addition +

Subtraction −

Multiplication x

Division ÷

LO: I am learning to find a missing number using the inverse.

? + 8 = 12

So we know that we need to use the opposite operation to solve it. What is the opposite of addition?

It is…

Addition +

Subtraction −

Multiplication x

Division ÷

LO: I am learning to find a missing number using the inverse.

? + 8 = 12

So we need to use the information we already have to create a subtraction number sentence.

We also need to remember the position of numbers when we are subtracting.

Where should the biggest number go?

What do you think the number sentence should be?

LO: I am learning to find a missing number using the inverse.

? + 8 = 12

The inverse of this number sentence will be:

12 – 8 = ?

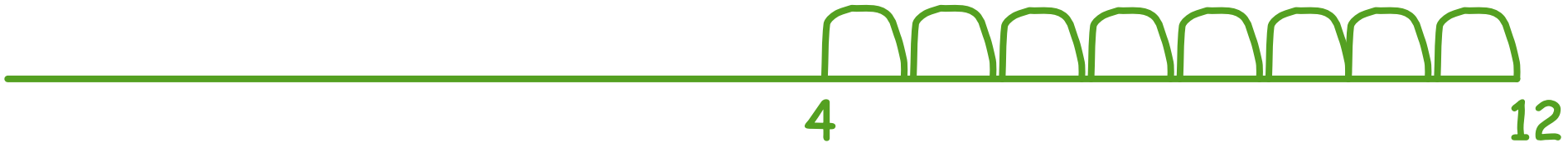
Remember when we take away the **biggest number** goes **first**.

Now we can use a blank number line to solve this to find out what ? is.

LO: I am learning to find a missing number using the inverse.

? + 8 = 12

12 – 8 = ?



12 – 8 = 4

so

4 + 8 = 12

We could check this on a number line:

LO: I am learning to find a missing number using the inverse.

Let's try another together.

? + 9 = 31

What will the inverse of this number sentence be?

LO: I am learning to find a missing number using the inverse.

? + 9 = 31

The inverse of this number sentence will be:

31 – 9 = ?

LO: I am learning to find a missing number using the inverse.

? + 9 = 31

31 – 9 = ?

Try using a blank number line to solve it.

Check your answer on the next slide.

LO: I am learning to find a missing number using the inverse.

? + 9 = 31

31 – 9 = ?

31 – 9 = 22

So

22 + 9 = 31

Well done!

LO: I am learning to find a missing number using the inverse.

Now solve the missing number sentences below using the inverse.
Remember to make sure the **biggest number** is **first** when subtracting.
Use a blank number line to solve your number sentence to find the missing number.

1. ? + 18 = 35
2. ? + 16 = 48
3. ? + 27 = 40
4. ? + 19 = 36
5. ? + 27 = 44
6. ? + 26 = 59
7. ? + 28 = 102
8. ? + 31 = 57

LO: I am learning to find a missing number using the inverse.

Challenge!

I solved the missing number sentence below. Can you please check if I got it right. If I am wrong tell me what mistake I made and correct it.

? + 7 = 12

7 - 12 =

7 - 12 = 0

0 + 7 = 12

Lesson 2
Addition missing number sentences where the second number is missing.

LO: I am learning to find a missing number using the inverse.

What can you remember from the first lesson?

What is the inverse?

How could you solve this?

? + 14 = 30

LO: I am learning to find a missing number using the inverse.

Remember the inverse is the opposite.

When we have a missing number in a number sentence we can use the inverse to help work out what the missing number is.

Today we will look at addition number sentences where the number missing is the second number in the number sentences.

For example: 6 + ? = 17

LO: I am learning to find a missing number using the inverse.

6 + ? = 17

Just like last time we first need to identify the operation and the inverse operation.

What operation is used?

What is the inverse operation?

What might the inverse number sentence be?

LO: I am learning to find a missing number using the inverse.

6 + ? = 17

The operation is addition +

The inverse operation is subtraction -

The inverse number sentence is:

17 – 6 = ?

Remember the **biggest number** goes **first** when we subtract.

LO: I am learning to find a missing number using the inverse.

We can then use a blank number line to solve the number sentence.

6 + ? = 17

17 – 6 = ?

17 – 6 = 11

so

6 + 11 = 17

LO: I am learning to find a missing number using the inverse.

Now solve the missing number sentences below using the inverse.
Remember to make sure the **biggest number** is **first** when subtracting.
Use a blank number line to solve your number sentence to find the missing number.

1. 18 + ? = 27

2. 9 + ? = 31

3. 11 + ? = 22

4. 15 + ? = 46

5. 17 + ? = 58

6. 13 + ? = 73

7. 10 + ? = 64

8. 12 + ? = 107

LO: I am learning to find a missing number using the inverse.

Challenge!

Have a go at solving the missing number sentences below using the inverse.
This time you may have to solve the addition number sentences first.
Once you've done this use a blank number line to solve your inverse number sentence to find the missing number.

1. 10 + ? = 8 + 7

2. 6 + ? = 3 + 5

3. 14 + ? = 9 + 8

4. 9 + ? = 7 + 2

Lesson 3
Subtraction missing number sentences where the first number is missing.

LO: I am learning to find a missing number using the inverse.

We have looked at addition number sentences with missing numbers and have had to use the inverse to solve them.

Now we will be looking at subtraction number sentences.

What is the inverse of subtraction?

LO: I am learning to find a missing number using the inverse.

The inverse is addition!

Let's look at an example:

? – 5 = 14

Remember the biggest number is the first number when we subtract so ? is bigger than 5 or 14.

What do you think the inverse number sentence might be?

LO: I am learning to find a missing number using the inverse.

? – 5 = 14

The inverse number sentence is:

14 + 5 = ?

If you said 5 + 14 = ? this is also correct!

Remember when we add it doesn't matter which way around the numbers are. It is just a little bit simpler to work out if the biggest is first. But it doesn't matter!

LO: I am learning to find a missing number using the inverse.

Now we can solve this addition number sentence on a blank number line.

Have a go.

? – 5 = 14

14 + 5 = ?

Check your answer on the next slide!

LO: I am learning to find a missing number using the inverse.

? - 5 = 14

14 + 5 = ?

14 + 5 = 19

so

19 - 5 = 14

LO: I am learning to find a missing number using the inverse.

Let's try another together.

? - 12 = 26

What will the inverse of this number sentence be?

LO: I am learning to find a missing number using the inverse.

? - 12 = 26

The inverse of this number sentence will be:

26 + 12 = ?

Now solve this on a blank number line. Check your answer on the next slide!

LO: I am learning to find a missing number using the inverse.

? - 12 = 26

26 + 12 = ?

10 2

26 + 12 = 38

so

38 - 12 = 26

LO: I am learning to find a missing number using the inverse.

Now solve the missing number sentences below using addition as the inverse.

Use a blank number line to solve your number sentence to find the missing number.

1. ? - 12 = 25

2. ? - 11 = 36

3. ? - 15 = 29

4. ? - 9 = 42

5. ? - 13 = 58

6. ? - 8 = 97

7. ? - 10 = 65

8. ? - 14 = 70

Lesson 4
Subtraction missing number sentences where the second number is missing.

LO: I am learning to use my knowledge of subtraction to find a missing number.

What can you remember from the last lesson?

What is the inverse?

How could you solve this?

? - 11 = 25

LO: I am learning to use my knowledge of subtraction to find a missing number.

Remember the inverse is the opposite.

Today we will look at subtraction number sentences where the number missing is the second number in the number sentences.

For example: 23 - ? = 17

LO: I am learning to use my knowledge of subtraction to find a missing number.

23 - ? = 17

If I try to use the inverse will this work?

23 + 17 = ?

But surely that doesn't work! I'm subtracting so the biggest number goes first.

If I add the two numbers then the biggest number will be my answer. That's not right!

LO: I am learning to use my knowledge of subtraction to find a missing number.

23 - ? = 17

This time I won't use the inverse operation but I can move the numbers in my number sentence to help me!

How could I do that?

What do you think?

LO: I am learning to use my knowledge of subtraction to find a missing number.

23 - ? = 17

I keep the operation the same but move numbers around.

I must keep the biggest number first so my number sentence will be:

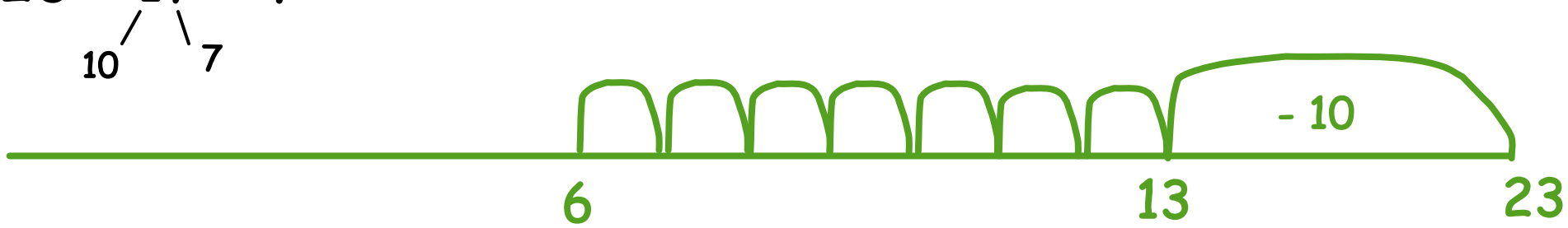
23 – 17 = ?

Now I can solve this on a number line. Have a go and check your answer on the next slide!

LO: I am learning to use my knowledge of subtraction to find a missing number.

23 - ? = 17

23 - 17 = ?



23 - 17 = 6

so

23 - 6 = 17

LO: I am learning to use my knowledge of subtraction to find a missing number.

Now solve the missing number sentences below by rearranging the numbers in the number sentence.
Remember to make sure you keep the **biggest number first**.
Use a blank number line to solve your number sentence to find the missing number.

1. 28 - ? = 12
2. 47 - ? = 18
3. 35 - ? = 20
4. 81 - ? = 23
5. 60 - ? = 16
6. 103 - ? = 35
7. 90 - ? = 21
8. 112 - ? = 39

Challenge!

Use all the strategies you've learnt this week to solve these different missing number problems.
You may have to use the inverse or you may have to rearrange the number sentence. Look at the earlier slides to remind you if you need help.
Remember to use a blank number line to solve your number sentence to find the missing number.

$3 + \square + 6 = 16$

$100 - \square = 52$

$20 + \square = 70$

$28 + \square = 35$

$\square + 5 = 9$

$50 - \square = 20$

$65 + \square = 93$

$56 - \square = 51$

$50 + \square = 80$

$98 - \square = 28$

$\square + 8 = 12$

$\square - 12 = 36$