



Year 1 Maths Home Learning | Summer Term



Week beginning 4th May (please note this is a 4-day week due to the Bank Holiday on Friday 8th May to commemorate VE day)

Maths

<https://www.bbc.co.uk/bitesize/tags/zjpqqp3/year-1-and-p2-lessons/1>

After watching the videos and having a go at the practise activities, have a go at these activities. Depending on your confidence choose Mild, Medium or Spicy.

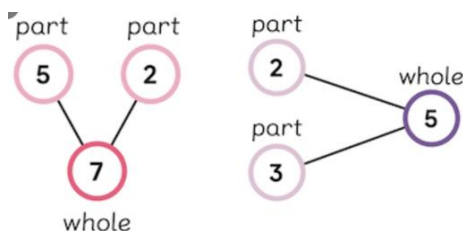
Remember, these activities are to work from, not on. There is no expectation to complete all of the work or to print worksheets off – children can work on paper if they want to write it down. It is also fine for your child to just say the answer, for instance, where it says 'circle all of the number bonds' it's fine for them to simply point to it! ☺



Extensions – You may wish to deepen your learning by looking at the worksheets provided by the BBC too.

Monday – **Part-whole relationships: Numberbonds**

A number can be thought of as a whole made up of different pairs, or parts, added together. Those pairs are called number bonds. Number bonds are different pairs of numbers that add up to a given number (e.g. 10). These number bonds can be used to help us better understand numbers, their parts, addition, and subtraction.



Mild

1 Find three different ways to make 4



$$\square + \square = 4$$

$$\square + \square = 4$$

$$\square + \square = 4$$

2 Find three different ways to make 6

$$\square + \square = 6$$

$$\square + \square = 6$$

$$\square + \square = 6$$

(Instead of circling and colouring, you could write them down or point to them)

3 Circle all the number bonds to 5

$$\begin{array}{ccccc} 2 + 3 & & 0 + 4 & & \\ & 5 + 1 & & & \\ 3 + 3 & & 3 + 2 & & 4 + 1 \\ & 0 + 5 & & & \end{array}$$

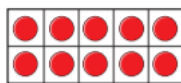
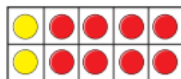
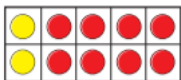
4 Colour all the number bonds to 9

$8 + 2$	$4 + 5$	$7 + 2$	$0 + 9$	$0 + 7$
$9 + 1$	$2 + 7$	$8 + 2$	$8 + 1$	$3 + 4$
$7 + 1$	$3 + 6$	$1 + 8$	$5 + 4$	$5 + 3$
$4 + 4$	$0 + 8$	$9 + 1$	$6 + 3$	$2 + 6$
$7 + 3$	$5 + 3$	$2 + 6$	$9 + 0$	$9 + 1$

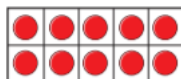
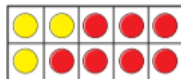
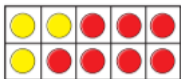
Medium

1 Write additions to match the ten frames.

a)



b)



2 Complete the number bonds.

a) $4 + 6$

b) $5 + 5$

$4 + 16$

$5 + 15$

c) $10 = \square + 1$

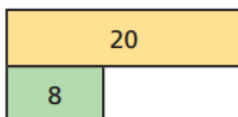
d) $10 = 3 + \square$

$20 = \square + 1$

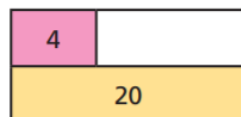
$20 = \square + 13$

3 Complete the bar models.

a)



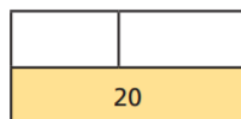
c)



b)



d)



(Instead of colouring, you could write them down or point to them)

4 Colour all the number bonds to 20

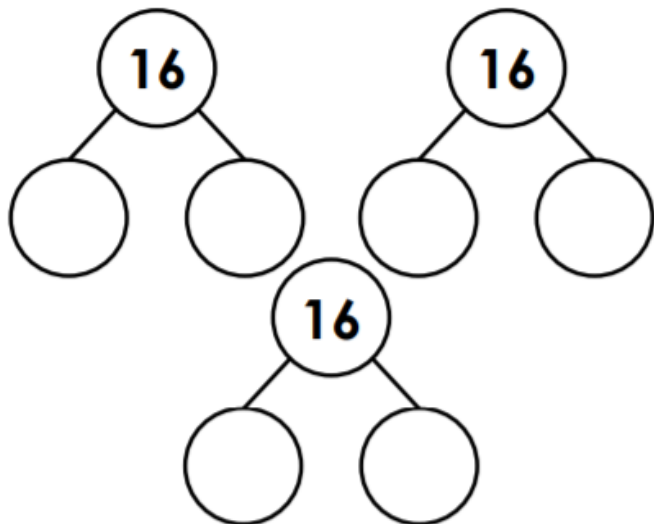
$14 + 3$	$17 + 3$	$2 + 18$	$0 + 20$	$3 + 16$	$9 + 11$	$17 + 3$	$18 + 2$	$2 + 0$
$18 + 1$	$3 + 7$	$12 + 7$	$5 + 15$	$4 + 8$	$1 + 19$	$13 + 5$	$20 + 0$	$1 + 15$
$11 + 8$	$11 + 9$	$19 + 1$	$3 + 17$	$10 + 0$	$13 + 7$	$16 + 2$	$8 + 12$	$5 + 5$
$5 + 6$	$4 + 16$	$19 + 0$	$10 + 1$	$2 + 0$	$14 + 6$	$17 + 1$	$11 + 9$	$11 + 8$
$12 + 5$	$12 + 8$	$18 + 2$	$15 + 5$	$4 + 15$	$16 + 4$	$10 + 10$	$15 + 5$	$13 + 3$

Make your own puzzle like this.

Spicy

1.

Find three ways to complete the part-whole model.



2.

Is Freya correct? Explain how you know.



I know $6 + 4 = 10$,
so $16 + 3 = 20$.



3.

True or false?

There are double the amount of numbers bonds to 20 than there are number bonds to 10

Prove it – can you use a systematic approach?

4.



Riddle Me This!

I'm thinking of a number.

If add 7, the answer is 20.
What number was I thinking of?

How do you know? Explain your answer.

Can you make a riddle for a friend to answer?



5.

Super Squares!

Each row and the column on this square adds up to 20.
Fill in the missing numbers.

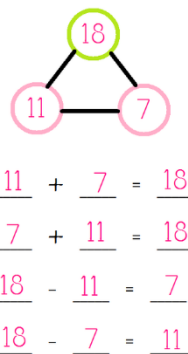
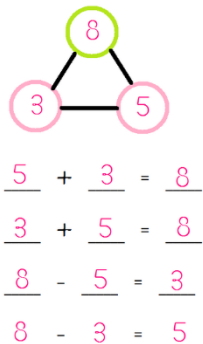


5		8
	11	
		4

Tuesday- Fact families: Linking addition and subtraction

A fact family is a group of math facts using the same numbers. In the case of addition/subtraction, using three numbers, four facts can be made. See the examples (picture) below where you can form a fact family using just three numbers:

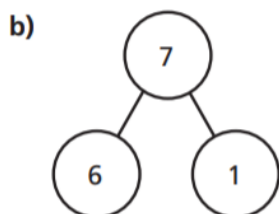
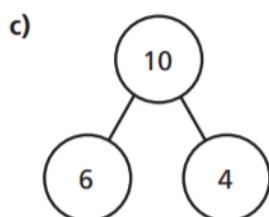
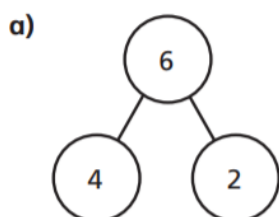
Number Bonds
also known as
Fact Families



Mild

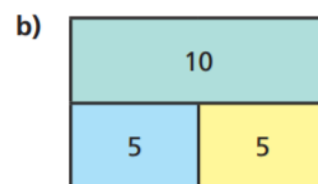
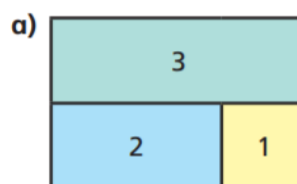
1 Complete a fact family for each part-whole model.

	+		=	
	+		=	
	=		+	
	=		+	



2 Complete a fact family for each bar model.

	+		=	
	+		=	
	=		+	
	=		+	

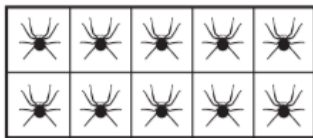


3 Use the digit cards to complete a fact family.

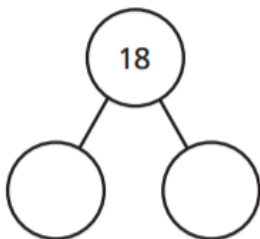
6	9	3
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Medium

1 Look at the picture.



Complete the part-whole model and fact family.



$$\square + \square = 18$$

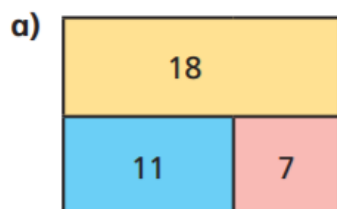
$$\square + \square = 18$$

$$18 - \square = \square$$

$$18 - \square = \square$$

Can you write each number sentence a different way?

2 Complete the fact family for each bar model.

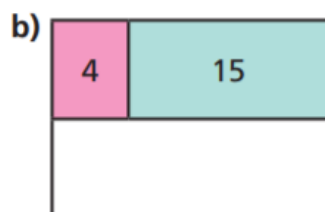


$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square - \square = \square$$

$$\square - \square = \square$$



$$\square = \square + \square$$

$$\square = \square + \square$$

$$\square = \square - \square$$

$$\square = \square - \square$$

3.

Related facts



Complete the table.

Problem	Calculation	Picture
There are 7 girls and 9 boys. How many altogether?	$7 + 9 = 16$	
	$9 + 7 = 16$	
	$16 - 7 = 9$	

Related Facts



Adult Guidance with Question Prompts

Children make links between addition and subtraction facts within 20. They write word problems and draw a pictorial representation for a set of related addition and subtraction facts. Children could use practical equipment to help with this activity.

What pattern do you notice with the addition calculations?

What pattern do you notice with the subtraction calculations?

Why can't you swap the first two numbers in the subtraction calculation?

If we know that $11 + 7 = 18$, which other addition calculation do you know?

Which two subtraction calculations do you know?

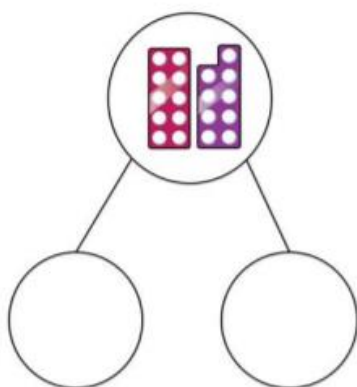
Why can't you swap the first two numbers in the subtraction calculation?

What problem can you write to match this calculation?

What picture can you draw to match this calculation?

Spicy

- Use the cards to write as many addition and subtraction sentences as you can.



nine

add

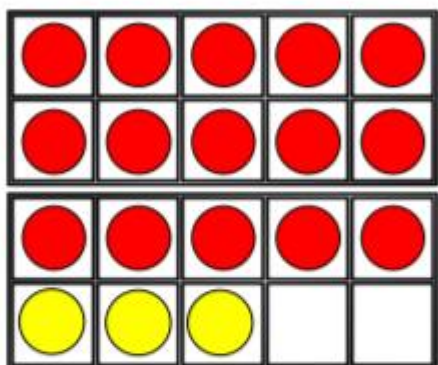
ten

subtract

nineteen

is equal to

2. Circle the addition and subtraction number sentences that match the ten frames. (Instead of circling, you could write them down or point to them)



$$15 + 3 = 18$$

$$15 - 3 = 18$$

$$3 + 18 = 15$$

$$18 - 15 = 3$$

$$18 + 3 = 15$$

$$18 - 3 = 15$$

$$18 = 3 + 15$$

$$15 - 18 = 3$$

3. Rhiannon looked at this bar model:



She wrote these calculations:



$$5 + 15 = 20$$

$$20 = 15 + 5$$

$$5 + 15 = 20$$

$$20 = 5 + 15$$

$$20 - 5 = 15$$

$$20 = 15 - 5$$

$$20 - 15 = 5$$

$$20 = 5 - 15$$

Has she written the calculations correctly?

Why do you think that?

Correct any mistakes Rhiannon has made.

Adult Guidance with Question Prompts

Children reason about the fact family represented by the bar model. They investigate to see if the calculations have been written correctly and explain their thinking.

What is the whole number represented by the bar model?

What are the parts of the whole number?

Has Rhiannon written eight different calculations? Can you see any that are the same?

Can you spot any mistakes?

Can you explain why she is wrong?

Has she repeated any calculations?

How could she have written it differently?

Are there any other mistakes?

Why is it wrong to write $20 = 15 - 5$?

How about $20 = 5 - 15$?

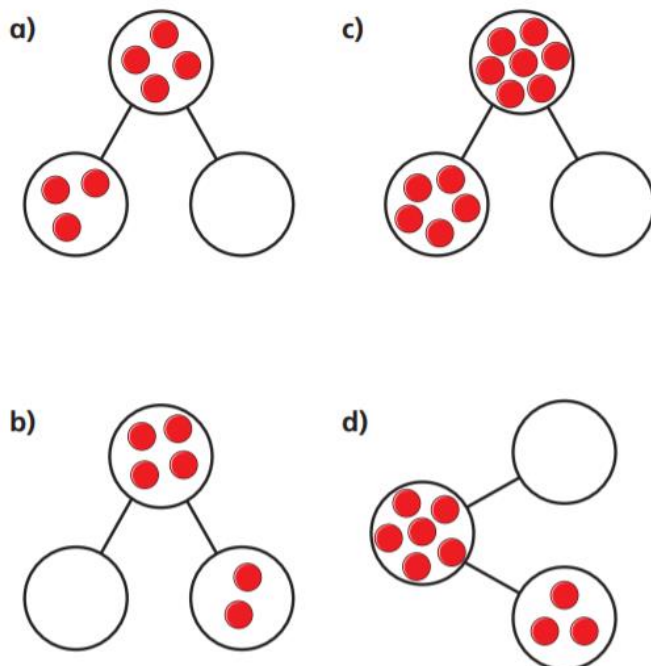
Which two subtractions should she have written?

Wednesday- Add together and find a part

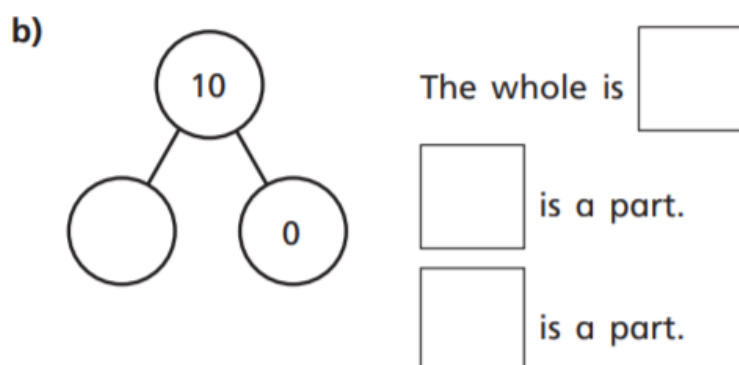
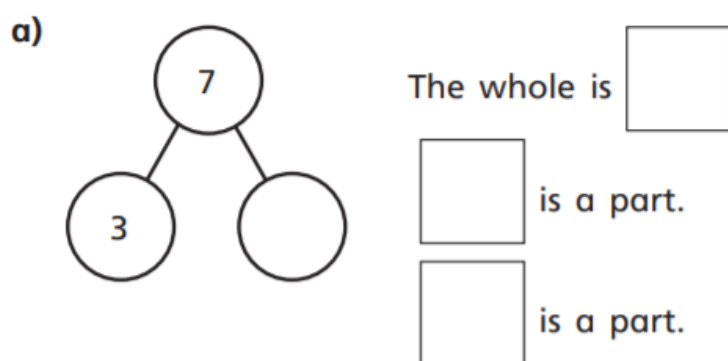
Children should apply their understanding of number bonds to solve missing number problems. Building from counting on, children should start from the given part and count on to the whole, to find the missing part.

Mild

- 1 Draw counters to complete the part-whole models.



- 2 Complete the part-whole models.
Complete the sentences.



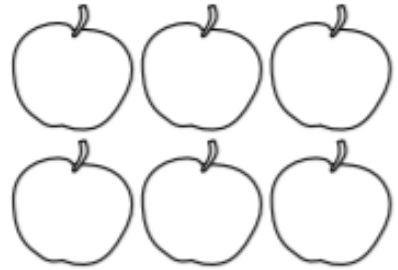
3

There are 6 apples in total.

2 apples are green.

The rest are red.

Colour the apples.



Complete the number sentence. $2 + \square = 6$



Medium

1. There are 8 shapes in total.

3 of the shapes are squares.

The rest are circles.

Draw a picture to show this.

How many circles are there?

2. Complete the number sentences.

$$4 + \square = 5$$

$$\square + 1 = 4$$

$$4 + \square = 4$$

$$5 = \square + 4$$

3.



1 p



6 p



4 p



?



6 p



4 p

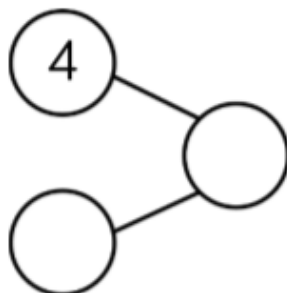
Eva spends 10p on a chocolate bar and something else. What else could she have bought? Explain how you know.

Jack spent 9p on a banana and a muffin. How much is a muffin? Explain how you know.

Rosie spent 6p on a chocolate bar and something for her brother. What did she buy for her brother? Explain how you know.

Spicy

1. Using the digits 0 – 9, how many ways can you complete the part-whole model? One of the parts always has to be 4



You can only use each digit once.

Explain why you can't use 0

What other digits can't you use and why?

2.

Finding a Part



Theo and his friends each have £10 to spend at the school fair. They spent some money at the tombola stand.

TOMBOLA

- 1 ticket £2
- 3 tickets £5
- 5 tickets £8



How many tickets did each of them buy if they got these amounts of change:

- Theo got £5 change
- Aisha got £2 change
- Ben got £8 change



This calculation represents how many tickets Theo's mum bought:

$$£10 - ? = £0$$

Can you explain what happened?

Adult Guidance with Question Prompts

Children could use number lines, ten-frames, bar models, part-whole models or known facts to solve this problem.

How much does Theo have to spend?

How much change did he get?

Can you write a calculation to show what we need to find out?

$$£10 - ? = £5$$

How can you find the missing number?

Which method will you choose?

Can you use equipment to help you?

Can you find out how much mum spent if she had no change?

What could she have bought for £10?

Can you use known facts to help you?

Can you see two amounts that go together to make £10?

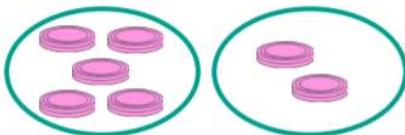
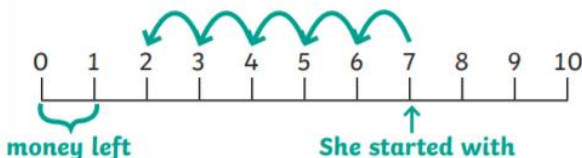
3.

Finding a Part



Theo's mum had £7; she spent some money at the cake sale. She got £2 change.

Which of these images represent how much she spent? Ring them.



Can you find any different ways of representing the calculation?

Adult Guidance with Question Prompts

Children discuss the different ways of representing a calculation. They look carefully at each representation to check it matches the calculation. They explain why the representations match or do not match.

What different representations can you see?

How much did mum spend?

Can you write it as a calculation?

Which of these images represent mum spending £5 of her £7?

How do you know?

Can you ring them?

Which ones represent a different calculation?

What calculation do they represent?

How else could we represent this calculation?

Children could use a part-whole model or £1 coins.

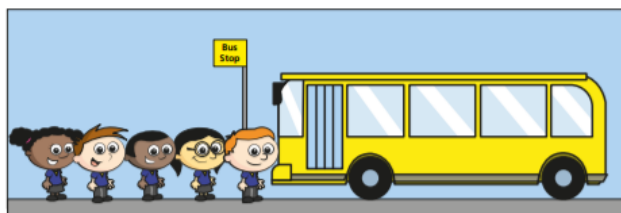
Thursday- Add more and count on within 20

Children explore addition by counting on from a given number. They begin to understand that addition is commutative and that it is more efficient to start from the largest number. It is important that children see that they are not just adding two separate numbers or items, they are adding to what they already have. Ensure children do not include their start number when counting on.

Mild

- 1 There are 9 children on the bus.

5 more children get on the bus.



How many children are on the bus now?

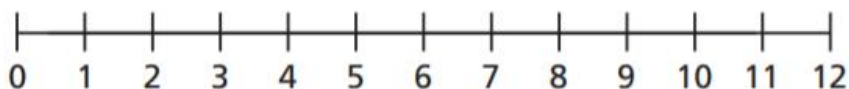
●	●	●	●	●
●	●	●	●	

- 2 Eva has 4 coins.

Jack gives her 7 more coins.

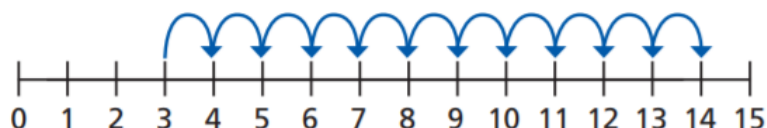
How many coins does Eva have now?

(You could draw your own number line or use this number line and your finger to count on)

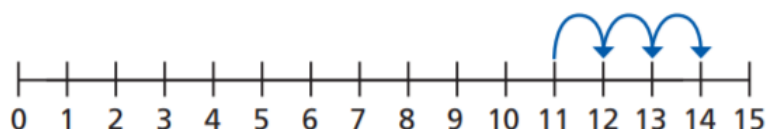


- 3 Ron and Mo are working out $3 + 11$ on a number line.

Ron's method



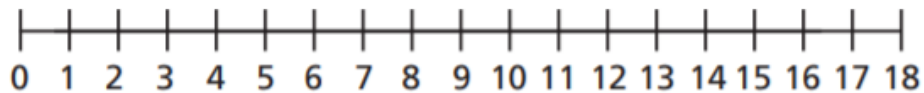
Mo's method



What is the same and what is different?

Use a number line to work out the additions.

(You could draw your own number lines or use this number line and your finger to count on)



a) $2 + 13$

b) $4 + 9$

c) $1 + 17$

Medium

1. Mo and Jack are working out $11 + 7$

Mo says,



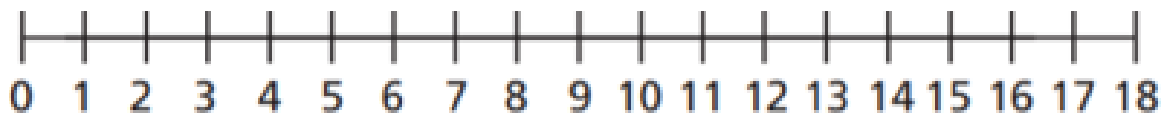
11, 12, 13, 14, 15, 16, 17

Jack says,



12, 13, 14, 15, 16, 17, 18

Use a number line to show who is correct.

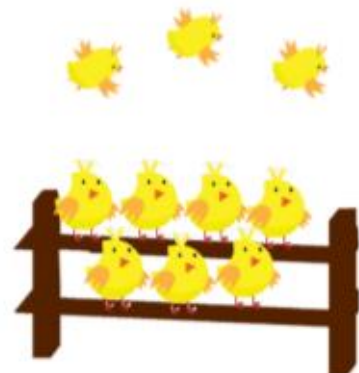


2. True or false?



There are 8 fish in a bowl.
4 more are added.
Now there are 14 fish.

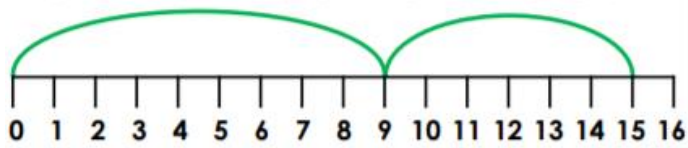
3. True or false?



There are 7 birds on a fence.
3 more fly down.
Now there are 10 birds.

4.

Circle the number sentence shown on the number line and write the answer.



$6 + 9 = \square$

$10 + 5 = \square$

$9 + 5 = \square$

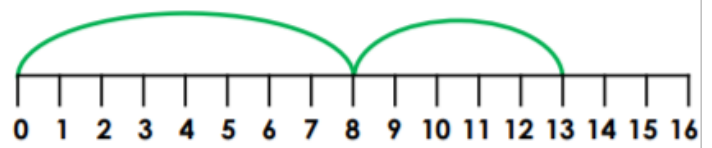
$9 + 6 = \square$



VF

5.

Circle the number sentence shown on the number line and write the answer.



$8 + 8 = \square$

$7 + 5 = \square$

$8 + 5 = \square$

$0 + 8 = \square$

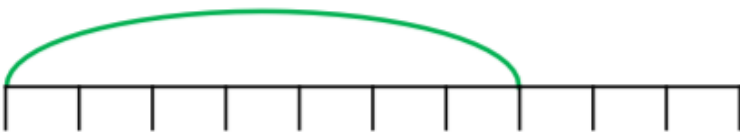


VF

Spicy

1.

Circle the number sentences that could be shown using this number line and write the answers.



$11 + 7 = \square$

$10 + 6 = \square$



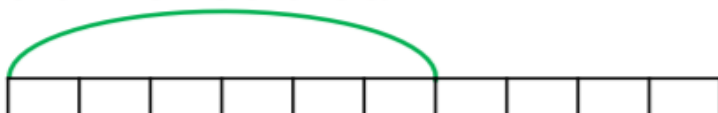
$13 + 7 = \square$

$8 + \square = 15$

VF

2.

Circle the number sentences that could be shown using this number line and write the answers.



$12 + 7 = \square$

$11 + 6 = \square$



$9 + \square = 15$

$8 + \square = 16$

VF

3.

Add by Counting On



Farmer James is using a number line to count his 7 cows and 9 sheep.

This number line represents the calculation $7 + 9$.



Is Farmer James correct? Explain your answer.

When counting on, you always need to start at the greater number.

Is Shep correct?
Explain your answer.



Adult Guidance with Question Prompts

This activity shows children that the smaller number can come first in calculations when counting on. They can use a number line alongside concrete materials to help them check the answer.

Can you describe what is happening on the number line?

Does it match the calculation that Farmer James said?

Where did he go wrong?

What should he have done?

Can you draw the number line correctly?

Does Farmer James's calculation start with the greater number?

Does a calculation always have to start with the greater number?

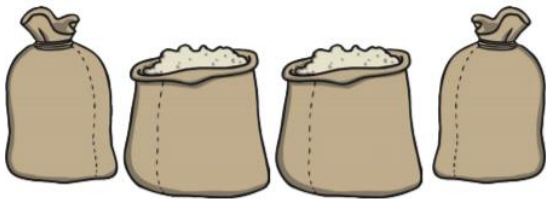
Is Shep correct?

4.

Add by Counting On



Farmer James is counting his sacks of animal feed. He has 4 sacks in the barn.



Altogether he has 16 sacks.

How many were outside the barn?
Ring the answer.

15 14
16 13 12

Write the number sentence.

Can you make up your own problem for Farmer James that involves counting on?

Adult Guidance with Question Prompts

Children solve problems by counting on. They use a number line to count on from four to 16 or use practical equipment, e.g. a ten-frame and counters. Some children may try to count on using their fingers but, as they need to add more than ten, they would be better supported by a number line or concrete materials. If you have access to toy farm animals, children could act out their own problems using these.

How many sacks were in the barn?

How many did Farmer James have altogether?

Can you show me on the number line/ten-frame?

How many more sacks did he have outside the barn?

Does your answer match a number in the box?

Can you write it as a number sentence?

Can you think of your own problem that involves counting on?