Welcome to Year 3 live maths lesson

The session will begin at 11.05

Turn your camera and microphone off please

Ark Curriculum+

REMOTE MATHS LESSON
Monday 18.1.21

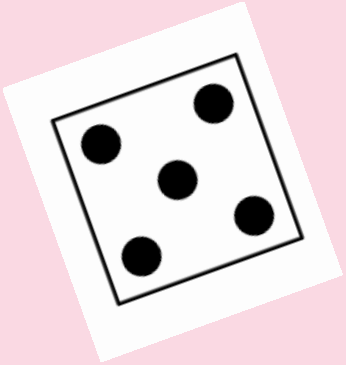
Year 3 Unit 6: Multiplication and division

Lesson 1: Exploring Commutative Law

Mathematics
Mastery

Doubling as ‘x2’

We are going to double the number on our dice. For each dot on the top of my die, I need two counters. How many groups of two counters do I need each time?



Do Now

Key learning: I will know that multiplication can be completed in any order

Star Words

whole

commutative

equal parts

Exploring commutativity for multiplication

This is Robin Hood and his Merry Men!

New Learning

Exploring commutativity for multiplication

This 'Merry Mole' has been asked to cook sausages for three of the Merry Men. If each person wants five sausages, how many does he need to cook altogether?

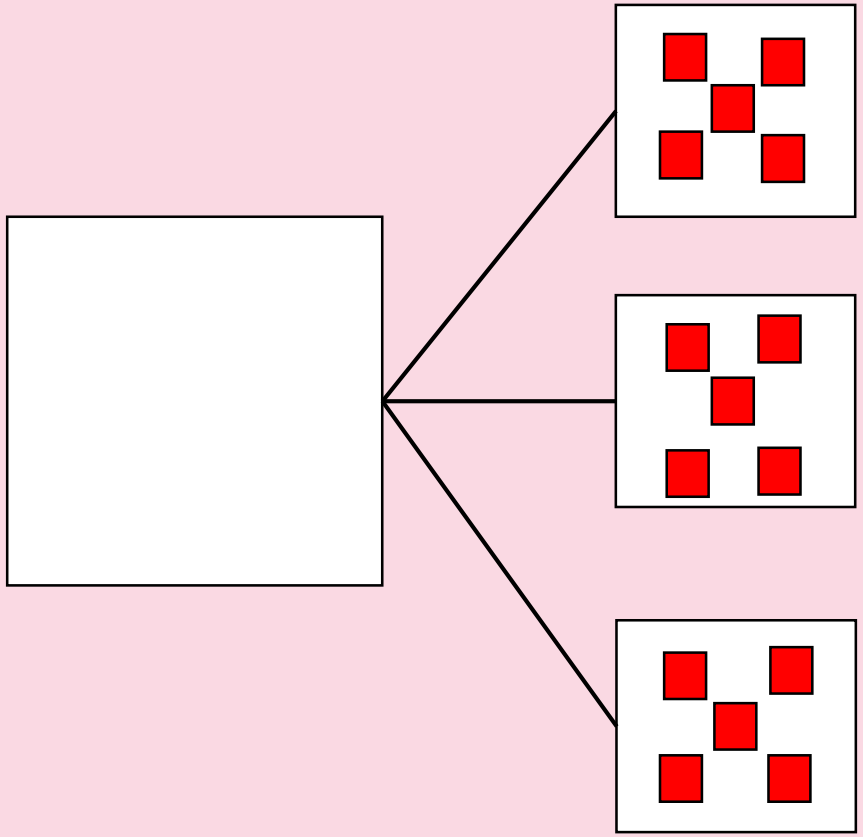
How could we represent this using counters?

New Learning

My turn

Each red square represents a sausage

I can see three groups of 5.
That's a group of 5 sausages for each of the three merry men.



- *How many equal parts or groups are there?*
- *What is the value of each part?*
- *What is the whole?*
- *Can I write a multiplication calculation for this?*

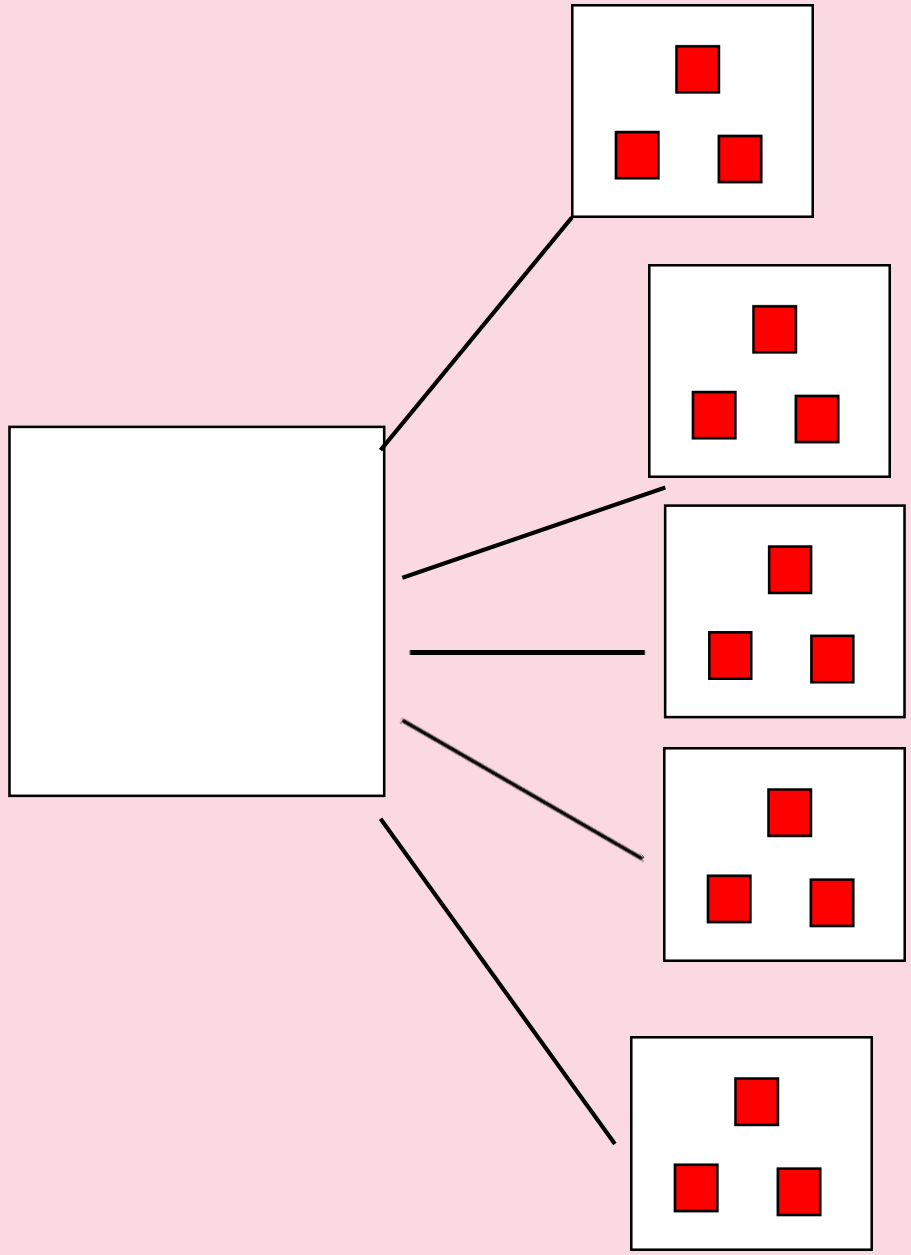
New Learning

Our turn

What about if there were 5 men who wanted three sausages each?

What might this look like?

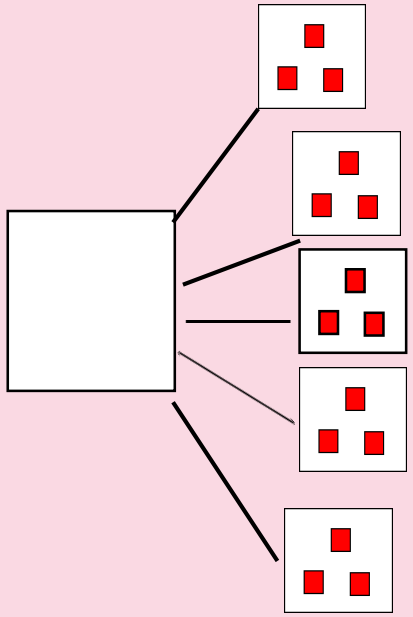
Can we write a multiplication calculation to match this?



New Learning

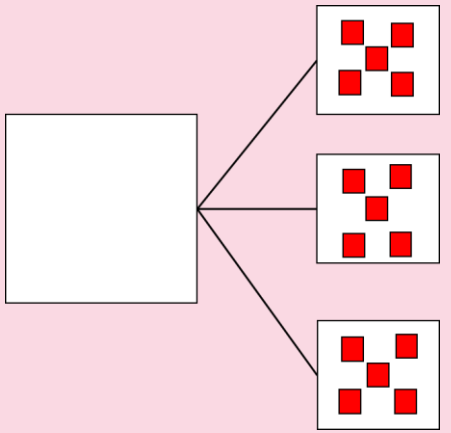
Exploring commutativity for multiplication

Are there the same number of sausages?



3 x 5 = 15

5 x 3 = 15

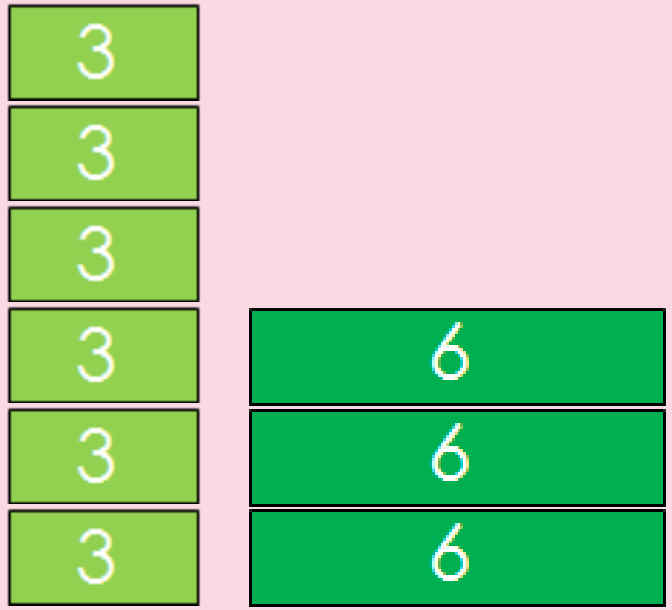


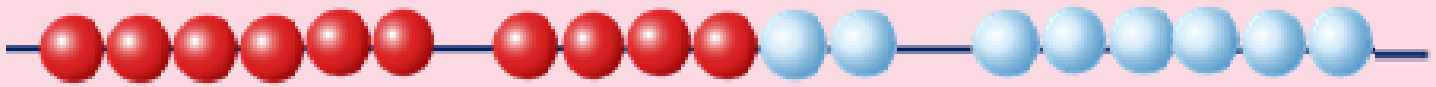
New Learning

Applying Commutative Law

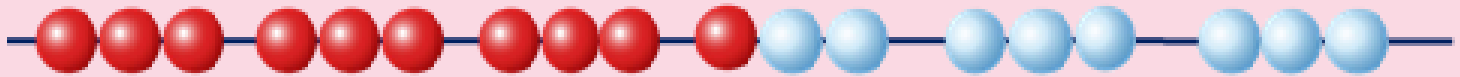
How could this be made easier to solve?

Does it matter which way round our model is? Does the size of the whole change?

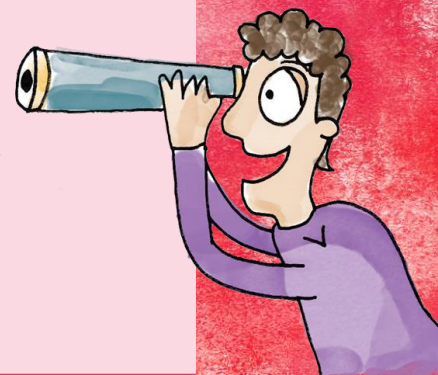




3 groups of 6



6 groups of 3



Match the calculation to it's commutative partner
Our turn

$9 \times 3 = \square$

$10 \times 7 = \square$

$3 \times 9 = \square$

$5 \times 2 = \square$

$2 \times 5 = \square$

$7 \times 10 = \square$

Independent Task

Your turn
Go into general folder and find your assignment
Choose your chilli task.

1. You will do the same task as we have practised.
2. Match the calculations which are commutative.
3. Work out the answer.
4. Your teacher will then post the answers into Teams so you can mark and fix it yourselves.

Independent task

Feedback

Was there anything you found tricky?

Was there anything you thought you did well with?

How can we help you?

Plenary

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Ark Curriculum+

Remote maths lesson
Tuesday 19.1.21

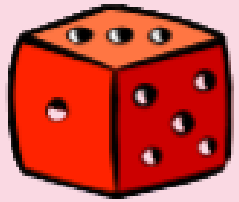
Year 3 Unit 6: Multiplication and division

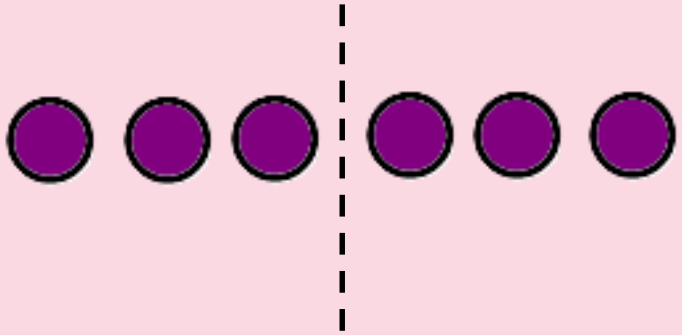
Lesson 2: Connecting multiplication and division

Mathematics
Mastery

Doubling and halving

I have six counters altogether. I divide them into two equal groups. Six counters divided into two makes equal groups of three. Half of six is equal to three.





$3 \times 2 = 6$

$6 \div 2 = 3$

Double 3 = 6

Half of 6 = 3

Do Now

Key learning: I will know how multiplication and division are inverse.

Star Words

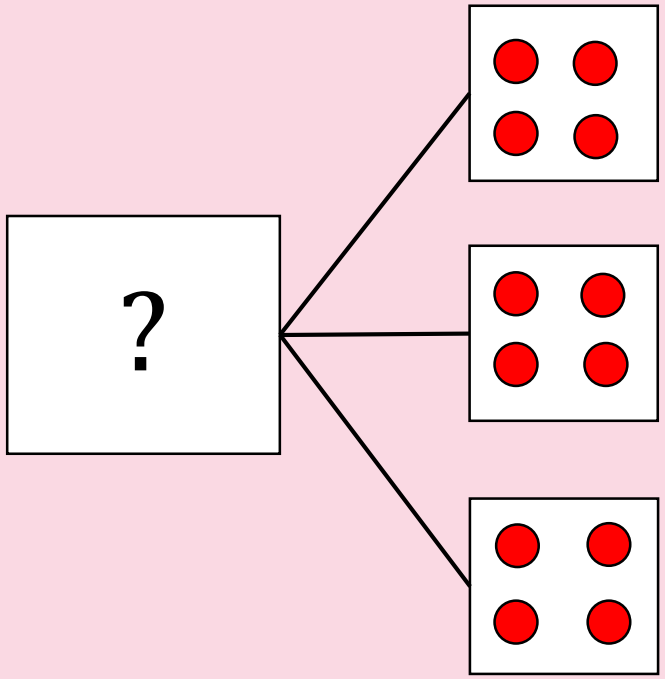
whole

bar model

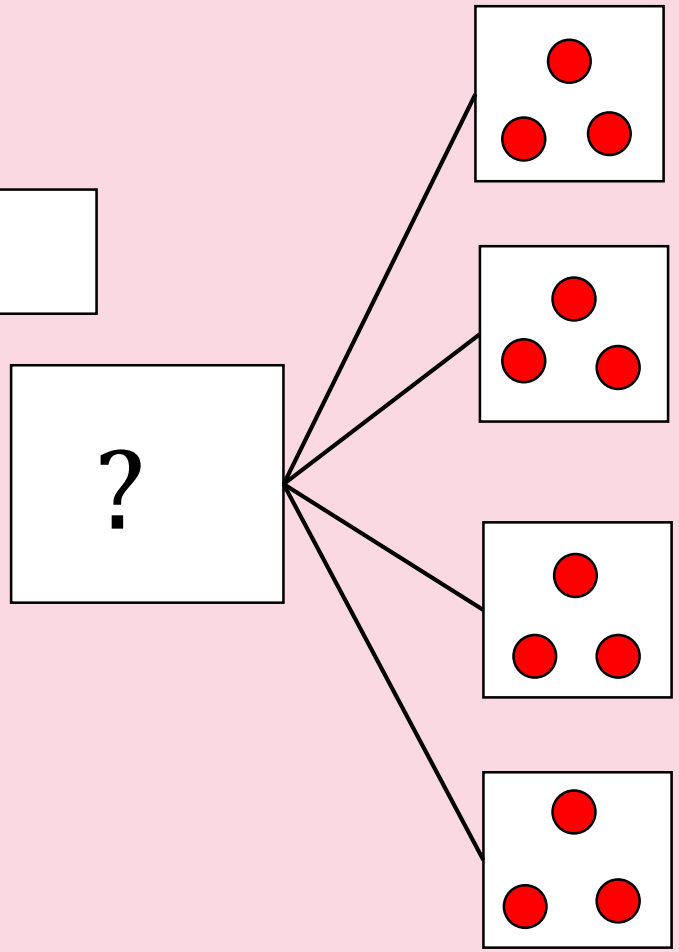
inverse

equal parts

Revise bar models, identifying a link between multiplication and division



$3 \times 4 = \square$



How many equal parts?
What is the value of each part?

Can you think of a problem represented by each of these part-whole models?

New Learning

What does this show us?
Can we write a calculation to match this bar model?

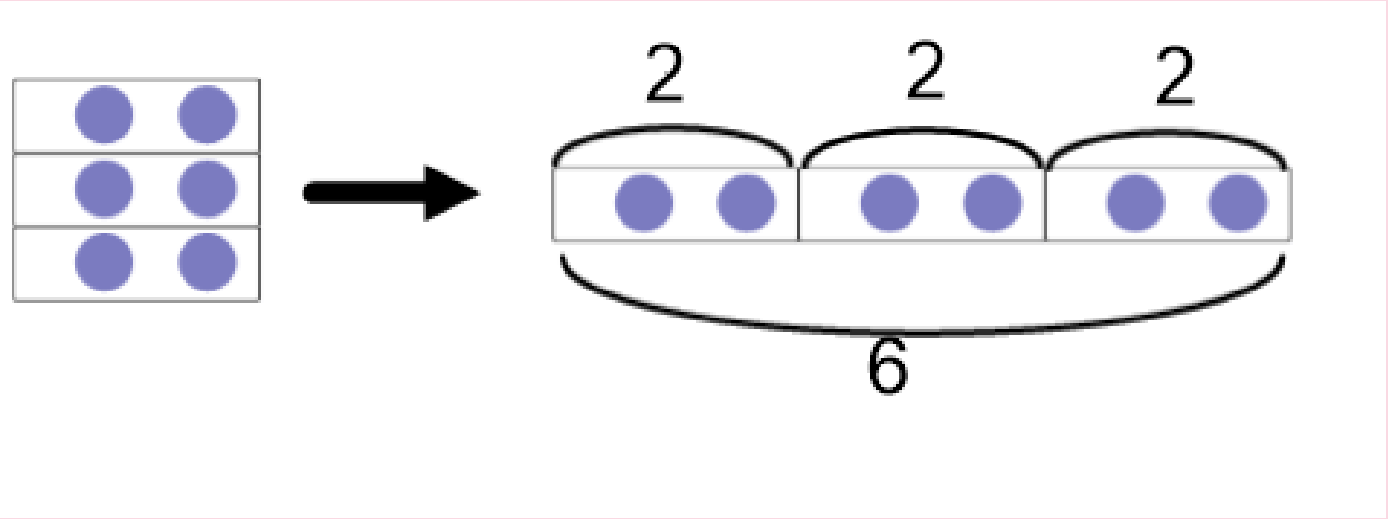
New learning

My turn

I will write a x calculation

array

Bar model

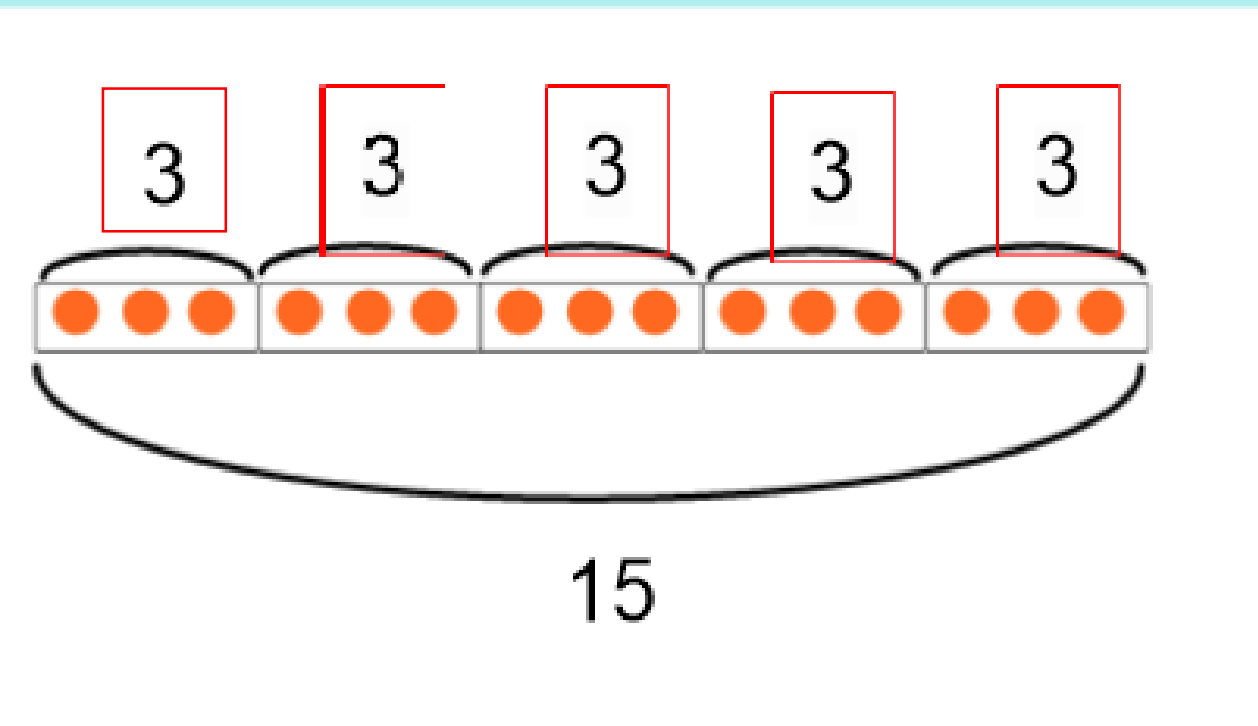


Our turn

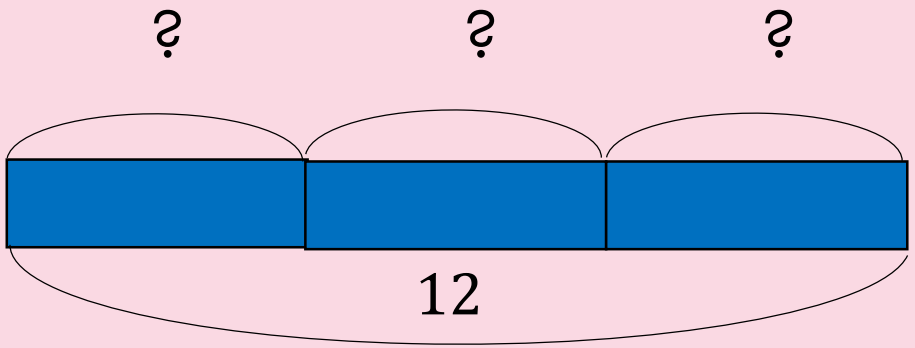
We will write a division calculation

Your turn

Write a multiplication and division number sentence for this bar model.

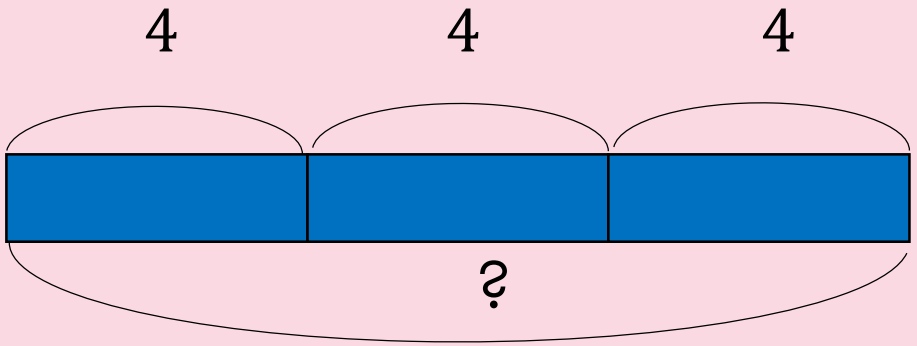


New Learning



How could we use what we know about x3 to work out the numbers on each of the bars?

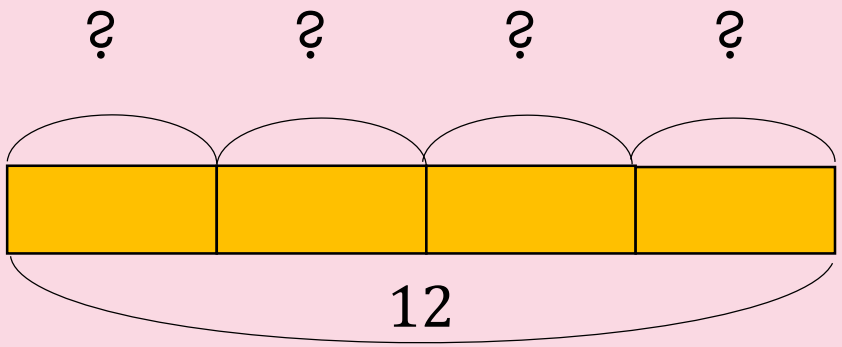
New Learning



How could we use what we know about x3 to work out the numbers on each of the bars?

Write the division equations represented by this.

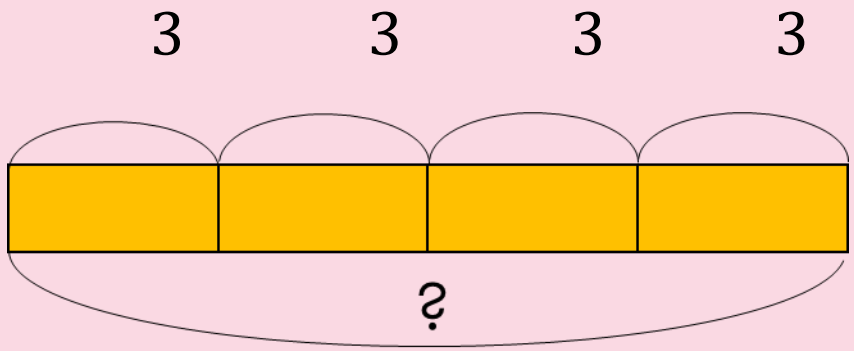
New Learning



How could we use what we know about x3 to work out the numbers on each of the bars?

Write the division equations represented by this.

New Learning



How could we use what we know about x3 to work out the numbers on each of the bars?

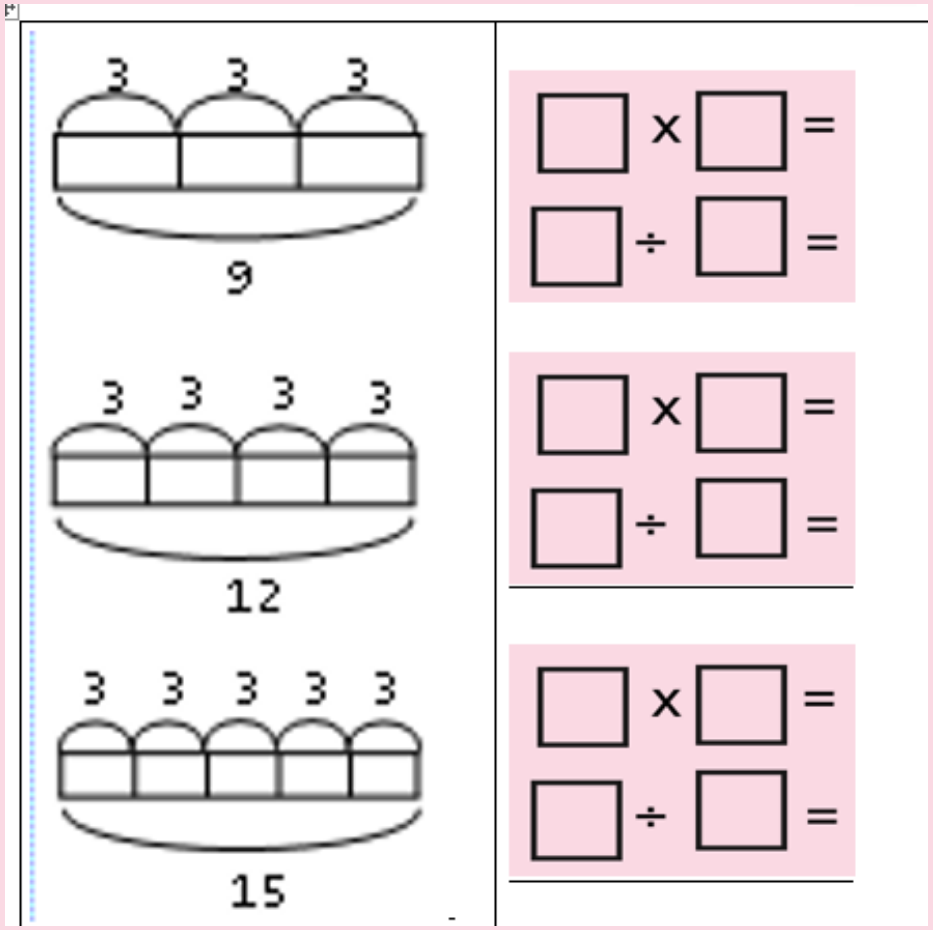
Write the division equations represented by this.

Your turn
Go into general folder and find your assignment
Choose your chilli task.

1. You will do the same task as we have practised.
2. Write a multiplication and division number sentence to match each bar model.
3. Your teacher will then post the answers into Teams so you can mark and fix it yourselves.

Independent task

Your 2 chilli task looks like this……



Independent

Feedback

Was there anything you found tricky?

Was there anything you thought you did well with?

How can we help you?

Plenary

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Ark Curriculum+

REMOTE MATHS LESSON
Wednesday 20.1.21

Year 3 Unit 6: Multiplication and division

Lesson 3: Recall multiplication and division facts

Mathematics
Mastery

Missing numbers

5 + ☐ = 10

2 + ☐ = 10

11 + ☐ = 20

14 + ☐ = 20

Fast finish challenge

15 + ☐ = 50

12 + ☐ = 40

21 + ☐ = 40

44 + ☐ = 50

Do Now

I will recognise how multiplication is the inverse of division

Star Words

whole

lots of

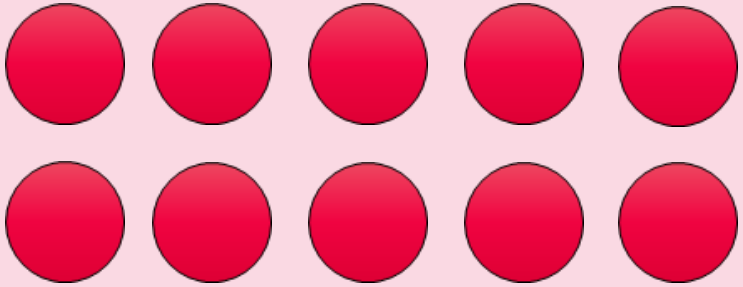
division

multiplication

groups of

equal parts

Consolidating the part-whole model for multiplication and division



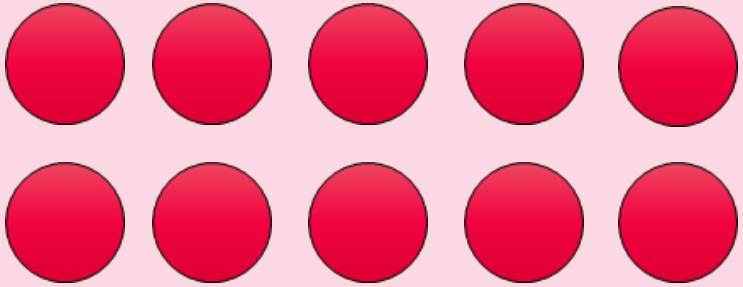
What equations could be represented by this array?

What problems could be represented?

What do we know about the value of the parts and the number of parts compared to the whole?

New Learning

Consolidating the part-whole model for multiplication and division

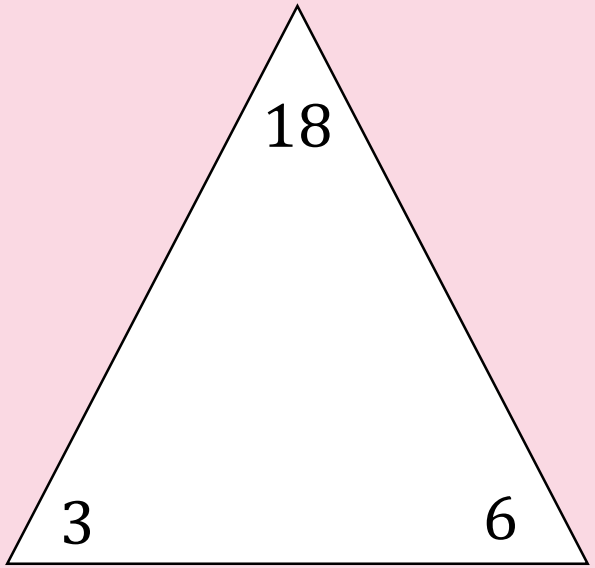


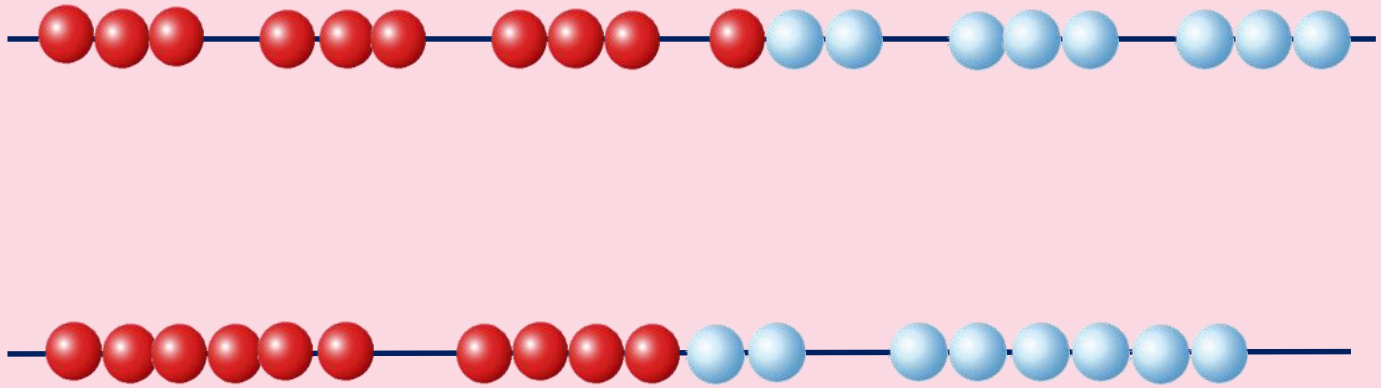
What equations could be represented by this array?

Move to reveal hidden content.

New Learning

How could these numbers be connected?



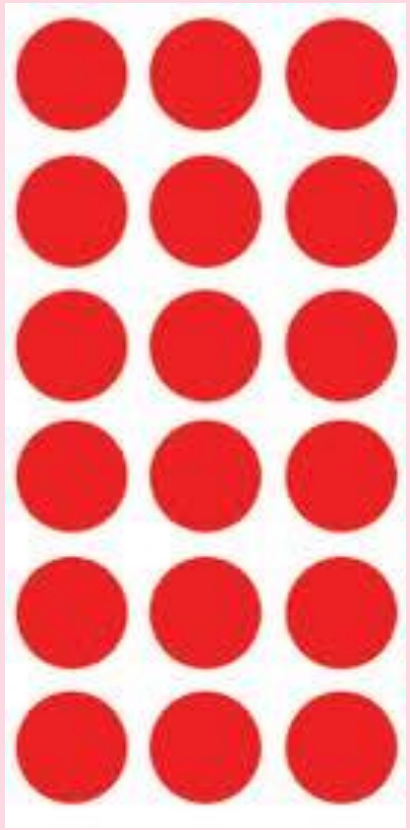


? *What relationships between the numbers does it show us?*
? *What calculations can we write to represent them?*

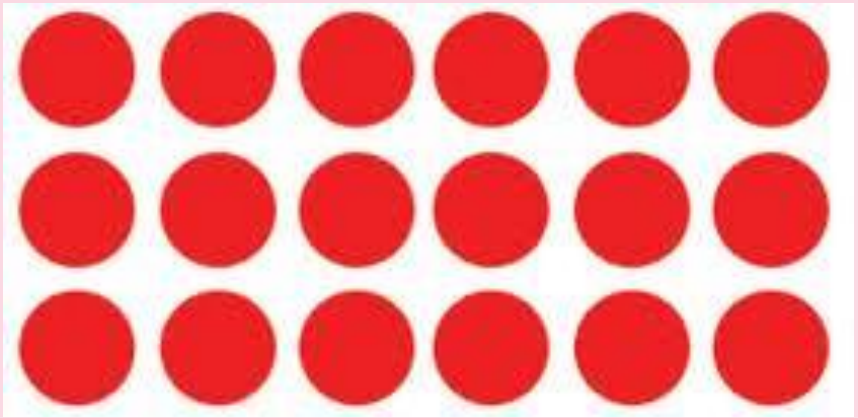
New Learning

the link between multiplication and division

my turn



There are six groups of three in 18.’

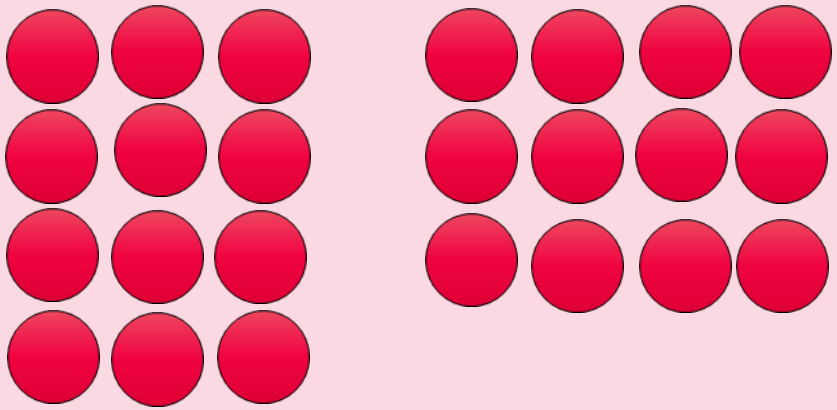


Click to reveal

New learning

the link between multiplication and division

our turn



□ x □ =

□ x □ =

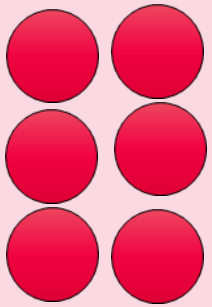
□ ÷ □ =

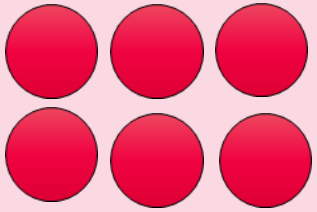
□ ÷ □ =

New Learning

the link between multiplication and division

your turn





□ x □ =

□ x □ =

□ ÷ □ =

□ ÷ □ =

New Learning

Your turn
Go into general folder and find your assignment
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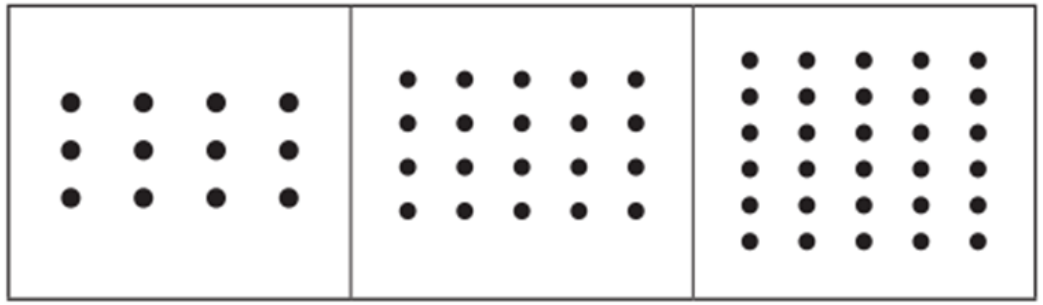
1. You will do the same task as we have practised.
2. Work out the answer and write it on the assignment (remember to open a comment box to do this)
3. Or you can write it on paper and send us a photo of your work on teams or DB Primary
4. Your teacher will then post the answers into Teams so you can mark and fix it yourselves.

Independent task

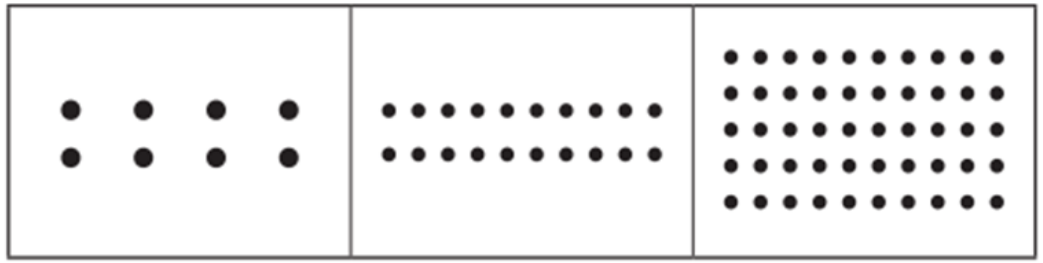
Your 2 chilli task looks like this

Write two multiplication sentences for each array.



3 x 4 = 12

4 x 3 = 12



Independent task

Feedback

Was there anything you found tricky?

Was there anything you thought you did well with?

How can we help you?

Plenary

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Ark Curriculum+

Remote maths lesson
Thursday 21.1.21

Year 3 Unit 6: Multiplication and division

Lesson 4: Recall and use multiplication and division facts

Mathematics
Mastery

Multiples
say the songs

THREE	SIX	NINE	TWELVE	FIFTEEN
3	6	9	12	15
three	six	nine	twelve	fifteen
EIGHTEEN	TWENTY-ONE	TWENTY-FOUR	TWENTY-SEVEN	THIRTY
18	21	24	27	30

FOUR	EIGHT	TWELVE	SIXTEEN	TWENTY
4	8	12	16	20
four	eight	twelve	sixteen	twenty
TWENTY-FOUR	TWENTY-EIGHT	THIRTY-TWO	THIRTY-SIX	FORTY
24	28	32	36	40

Do Now

Multiples
say the songs

FIVE	TEN	FIFTEEN	TWENTY	TWENTY-FIVE
5	10	15	20	25
five	ten	fifteen	twenty	twenty-five
THIRTY	THIRTY-FIVE	FORTY	FORTY-FIVE	FIFTY
30	35	40	45	50

TWO	FOUR	SIX	EIGHT	TEN
2	4	6	8	10
two	four	six	eight	ten
TWELVE	FOURTEEN	SIXTEEN	EIGHTEEN	TWENTY
12	14	16	18	20

Do Now

Key learning:

I will know how to recognise the inverse relationships between multiplication and division

multiply

divide

inverse

multiples

Star Words

New learning

How can we find the missing number?

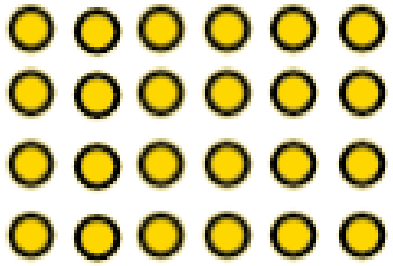
$4 \times \square = 24$

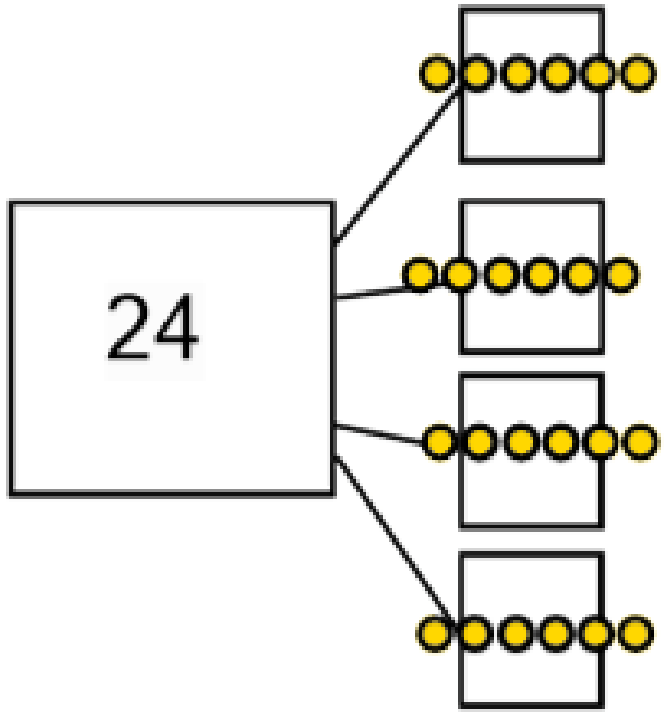
How could I present this on a part-whole model?

New learning

What's the same? What's different?

$4 \times \square = 24$





Our turn

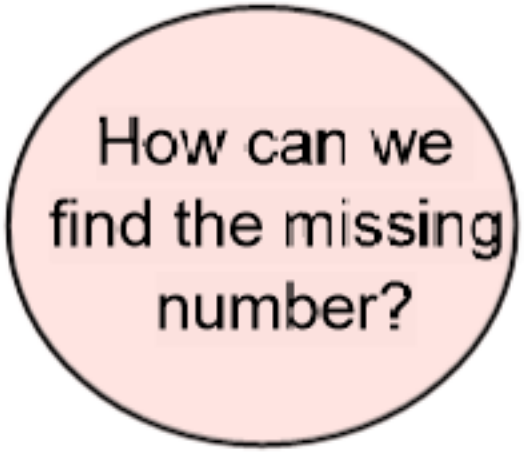
How can we find the missing number?

$3 \times \square = 21$

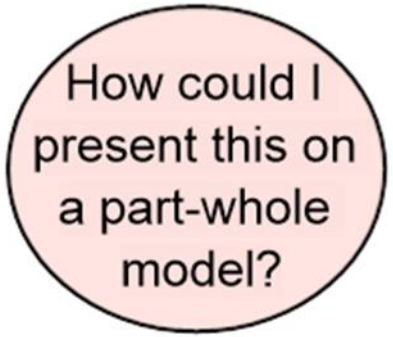
How could I present this on a part-whole model?

New learning

your turn



$2 \times \_\_\_ = 20$



New learning

Puzzle

I multiplied a number by 4 and my answer was 32.

What was my number?

Multiplied by 4 is the 4x table
So lets count in 4's.

If we skip count in fours,
how many times do we do this
Until we get to 32?

FOUR	EIGHT	TWELVE	SIXTEEN	TWENTY
4	8	12	16	20
four	eight	twelve	sixteen	twenty
TWENTY-FOUR	TWENTY-EIGHT	THIRTY-TWO	THIRTY-SIX	FORTY
24	28	32	36	40

New learning

Your turn
Go into general folder and find your assignment
Choose your chilli task.

1. You will do the same task as we have practised.
2. Work out the answer and write it on the assignment (remember to open a comment box to do this)
3. Or you can write it on paper and send us a photo of your work on teams or DB Primary
4. Your teacher will then post the answers into Teams so you can mark and fix it yourselves.

Independent task

Your 2 chilli task looks like this

I multiplied a number by 3 and my answer was 18. What was my number?

I multiplied a number by 3 and my answer was 21. What was my number?

I multiplied a number

Independent task

Feedback

Was there anything you found tricky?

Was there anything you thought you did well with?

How can we help you?

Plenary

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Ark Curriculum+

REMOTE MATHS LESSON
Friday 22.1.21

Year 3 Unit 6: Multiplication and division

Lesson 5: Using multiplication facts to solve division word problems

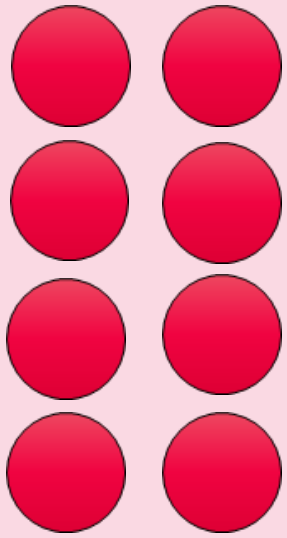
Mathematics
Mastery

Finding fact families

Choose an array to write a X or ÷ calculation for

Do Now

8



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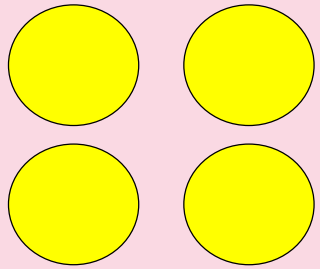

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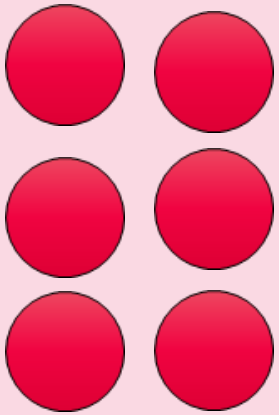

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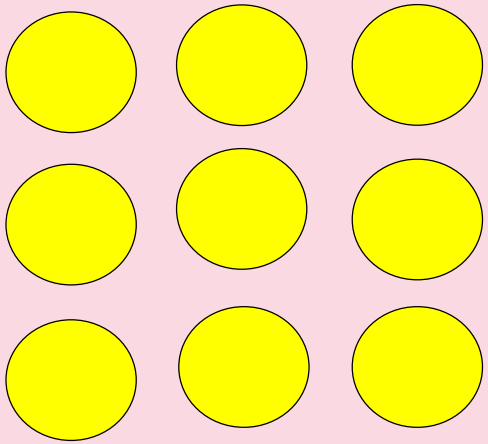


I will know how to solve division problems using knowledge of multiples

Star Words

whole

multiple

inverse

sharing

a multiple of

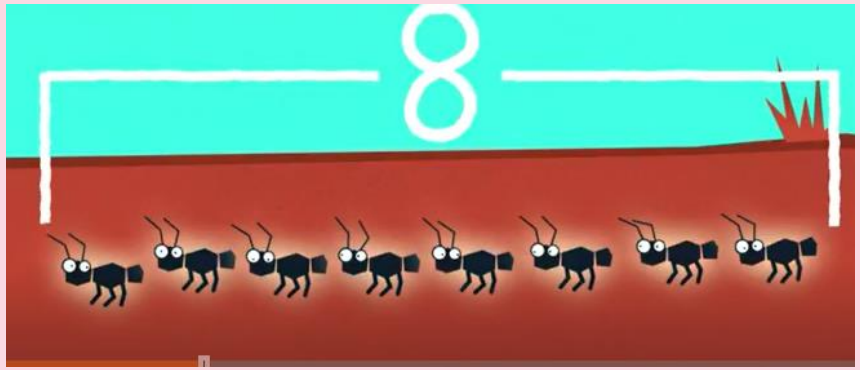
factor

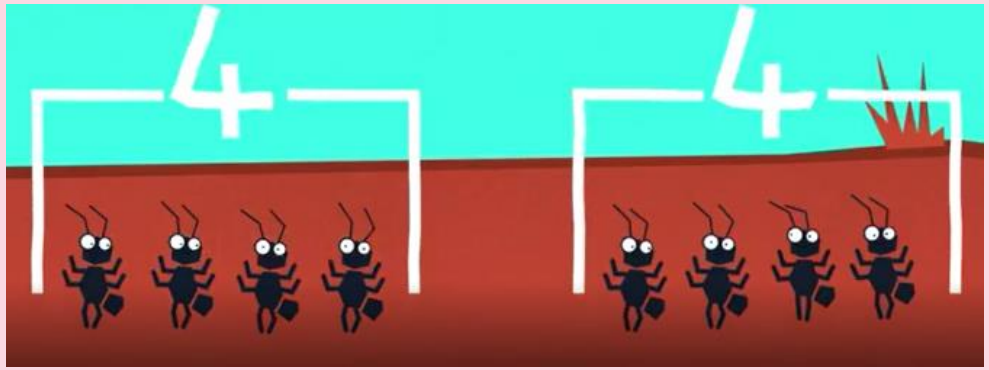
equal parts

Factors are numbers that divide exactly into another number.

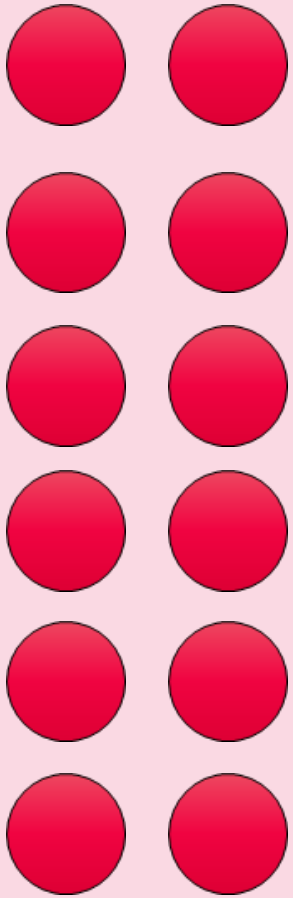
For example, the factors of 8 are:

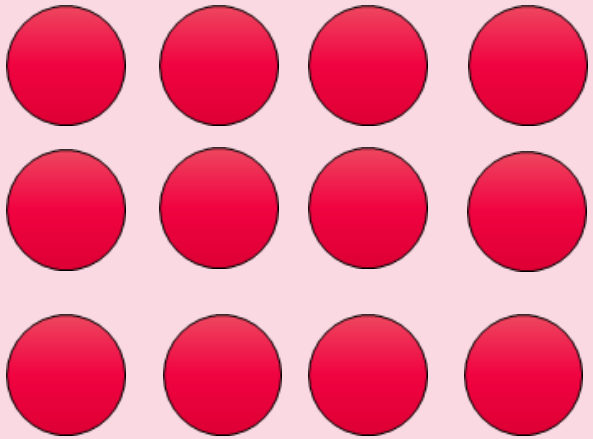
1, 2, 4 and 8

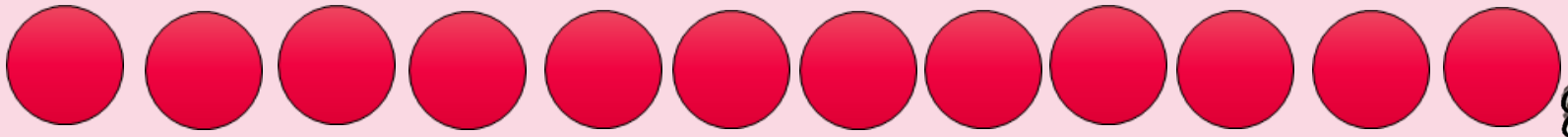




Multiples and factors of 12







- *What number is the product (whole) in all of these arrays?*
- *How many equal parts can each array show? And what is the value of the parts?*
- *So, what factors have been multiplied to make 12 in each example?*

New Learning

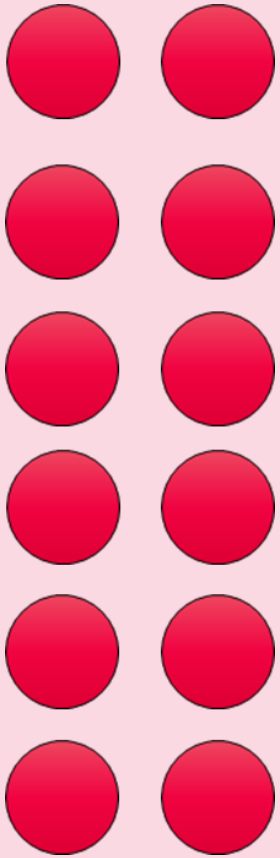
New learning

Sharing the money

Robin Hood is very fair and wants to share his 12 equally between his friends in Sherwood Forest.

He's not sure how many friends will show up, so he is wondering how many different ways he can share his 12 coins.

How many different ways can we divide (share) 12 coins?



Can we use our multiples?

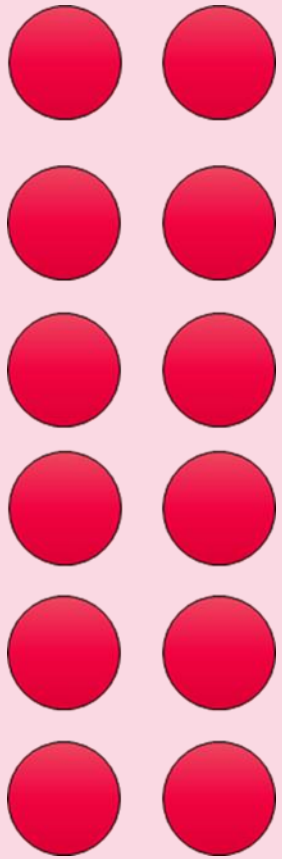
If we skip count in 2's do we land on 12?

If we skip count in 3's do we land on 12?

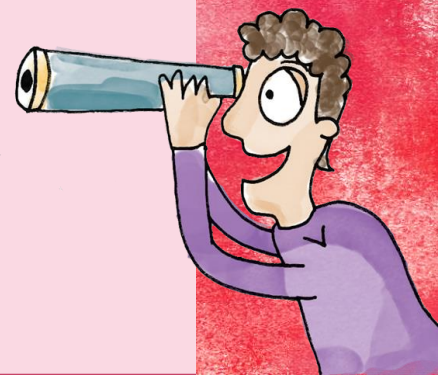
What about 4's 5's 6's?

New learning

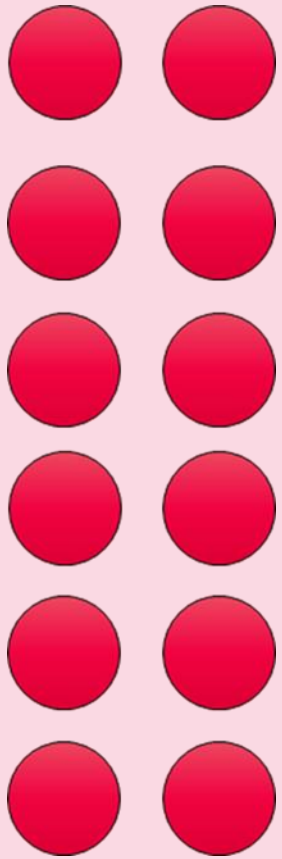
My turn



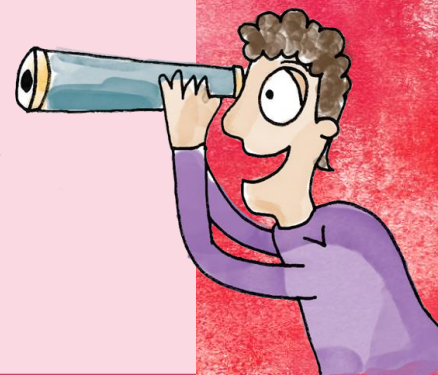
Develop Learning



Our turn



Develop Learning



Your turn

Use your knowledge of multiples or find 12 counting objects to share.

You will investigate how many different ways you can share 12.
REMEMBER they have to be equal groups.

You should write your calculations on your assignment or send your teacher a photo on DB.

Before you begin watch this BBC Bitesize video to help.
The link is in your TEAMS maths folder.
https://www.bbc.co.uk/bitesize/topics/zfq7hyc/articles/zp6wfcw

Independnet

Feedback

Was there anything you found tricky?

Was there anything you thought you did well with?

How can we help you?

Plenary