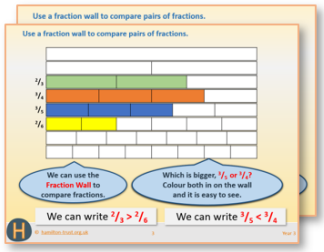
Week 8, Day 2

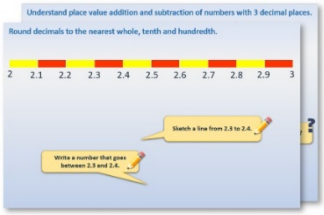
Division as the opposite of multiplication

Each day covers one maths topic. It should take you about 1 hour or just a little more.

1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



OR start by carefully reading through the **Learning Reminders**.



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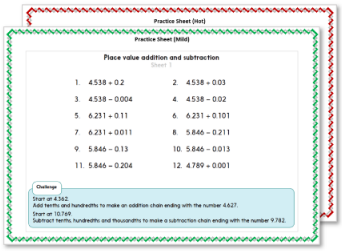
2. Tackle the questions on the **Practice Sheet**.
There might be a choice of either Mild (easier) or Hot (harder)!
Check the answers.



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3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**

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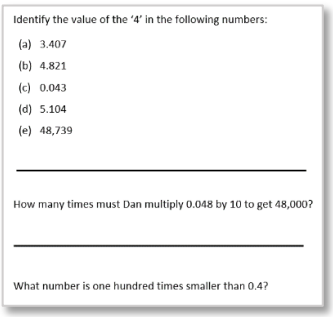
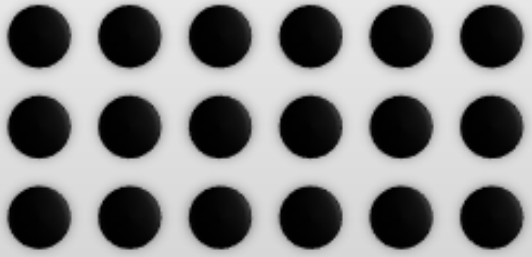
4. Have I mastered the topic? A few questions to **Check your understanding**.
Fold the page to hide the answers!



Learning Reminders

Understand how to read an array; Use grouping to help write division number sentences.

I have 3 packets of 6 buns. Let's draw an array to show 3 lots of 6 buns.



3 × 6 = 18

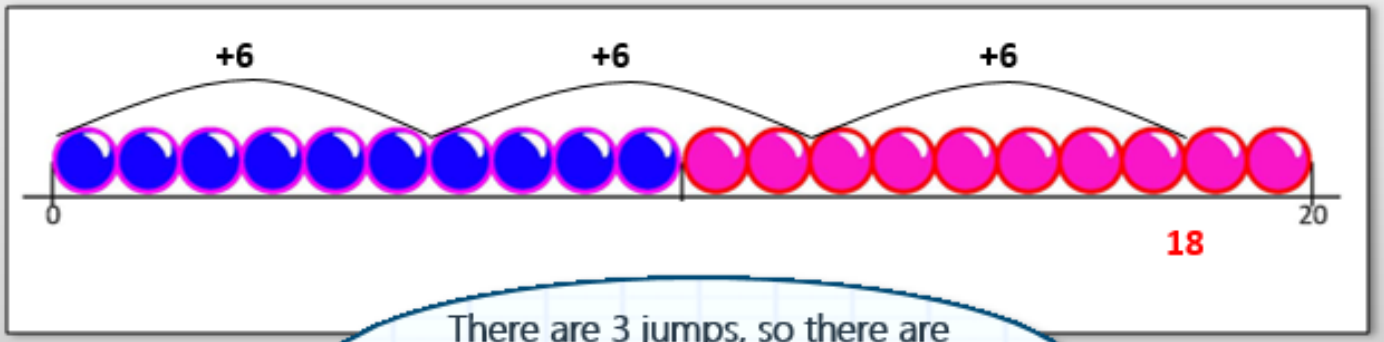
Now start with the number 18. Can you think of a word problem that starts with 18 buns and involves grouping?

Learning Reminders

Know that division is the inverse of multiplication; Create and solve division problems.

If there are 18 buns altogether and the baker puts them into packets of 6, how many packets will he need? What are we going to have to do to solve this problem?

How many groups of 6 are there in 18? We can use a beaded line to find out! Let's draw jumps of 6 and see how many there are until we reach 18.

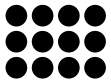
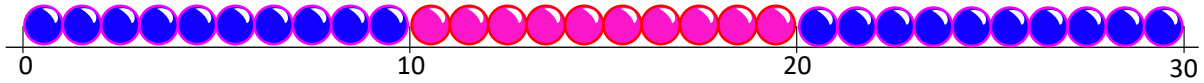


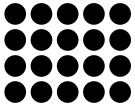
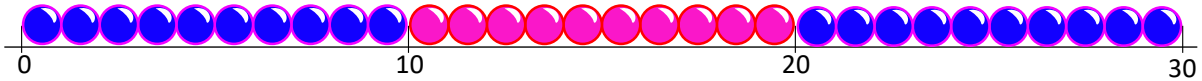
There are 3 jumps, so there are three 6s in 18. 18 ÷ 6 = 3.
So 3 packets will be needed.

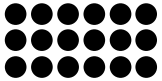
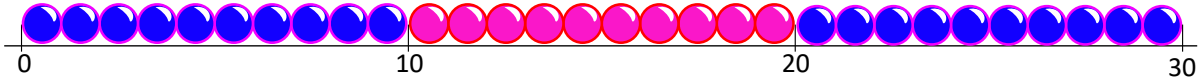
Practice Sheet Mild

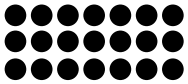
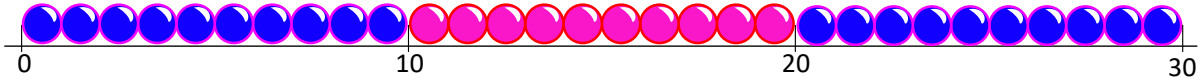
Making division word problems

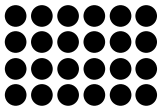
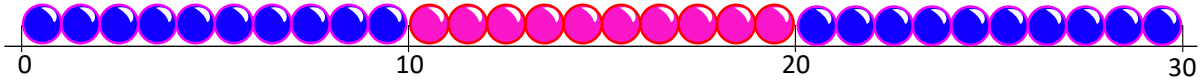
Write your own grouping word problem for the following arrays. Can you solve each one?
Record your answer as a grouping (division) fact.

1. 


2. 


3. 


4. 


5. 


Challenge

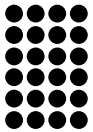
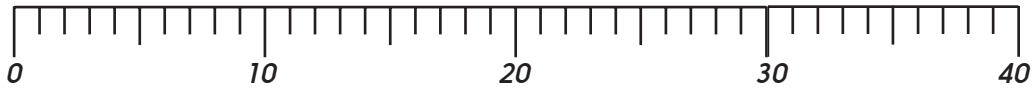
Pick one of the arrays and write a multiplication ***and*** a division word problem for the same array.

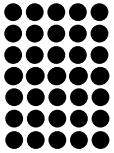
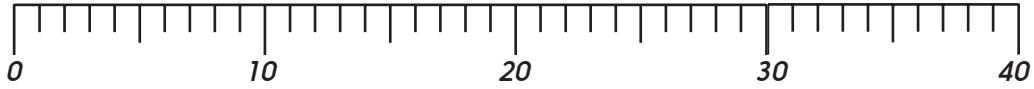
 Explore more Hamilton Trust Learning Materials at https://wrht.org.uk/hamilton

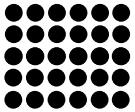
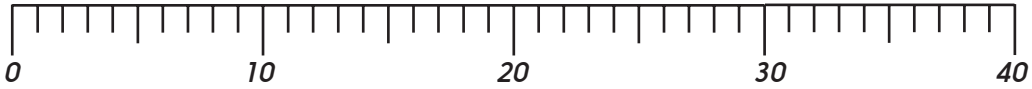
Practice Sheet Hot

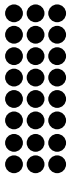
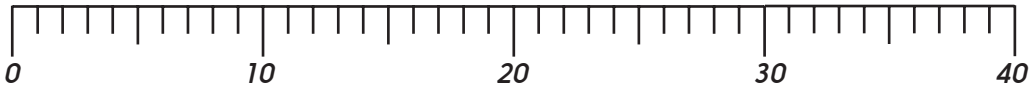
Division word problems

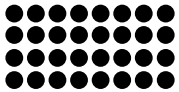
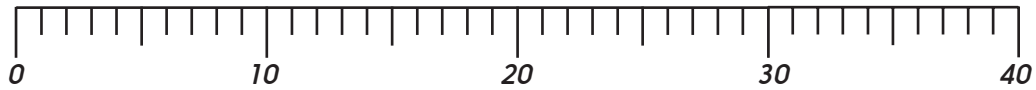
Write your own grouping word problems for the following arrays. Can you solve each one?
Record your answer as a grouping (division) fact.

1. 


2. 


3. 


4. 


5. 


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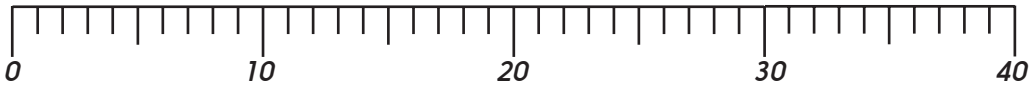


Challenge

Pick one of the arrays and write a multiplication ***and*** a division word problem for the same array.

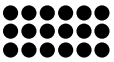
Practice Sheet Answers

For the arrays on all the Day 2 sheets children should have written a corresponding grouping word problem.

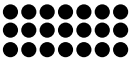
Making division word problems (Mild)

e.g. 12 ÷ 4 = 3

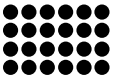
20 ÷ 5 = 4



18 ÷ 6 = 3



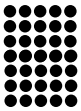
21 ÷ 3 = 7



24 ÷ 6 = 4

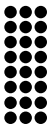
Division word problems (Hot)

e.g. 24 ÷ 4 = 6

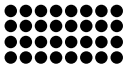


35 ÷ 7 = 5

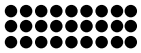
30 ÷ 6 = 5



24 ÷ 3 = 8



32 ÷ 8 = 4



27 ÷ 9 = 3

Challenge

Accept any multiplication and division word problems which have been written about the same array.

Investigation
Ring the fives

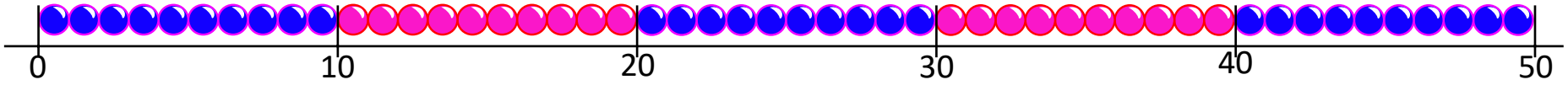
Work in pairs

Things you will need:
- A pencil

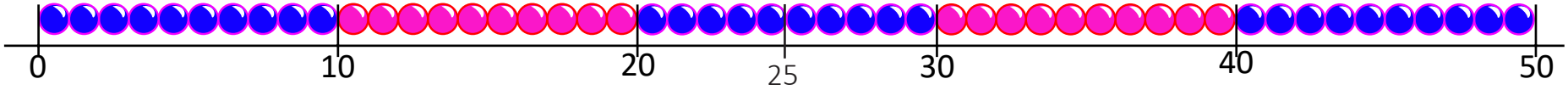
What to do:

Draw rings round groups of 5 beads to work out the answers to these questions:

1. How many 5s are in 20? ☐



2. How many 5s are in 25? ☐



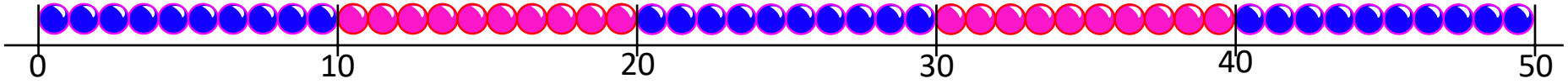
S-t-r-e-t-c-h:

Write multiplications to go with some of your answers.

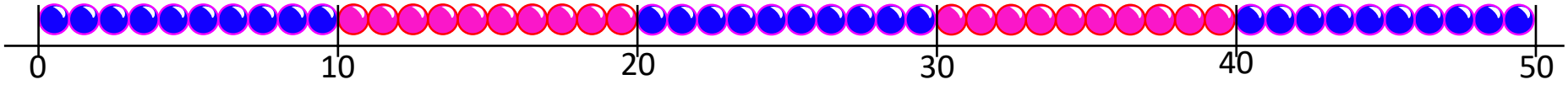
Learning outcomes:
- I can ring groups on a beaded line to find how many 5s are in a number.
- I am beginning to see the link between multiplication and division.

Investigation
Ring the fives

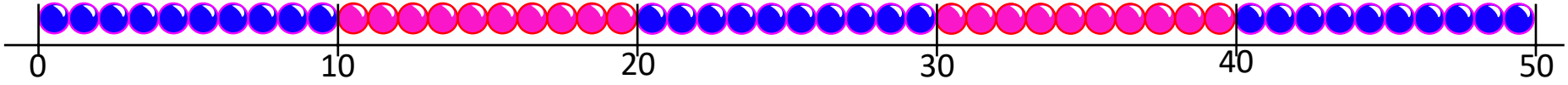
3. How many 5s are in 40? ☐



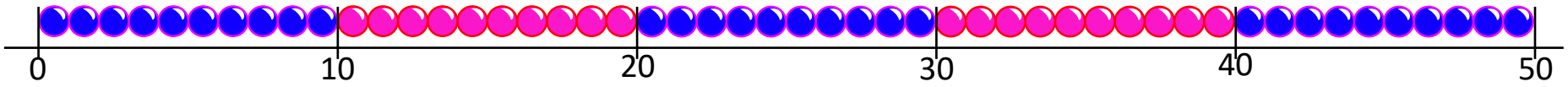
3. How many 5s are in 50? ☐

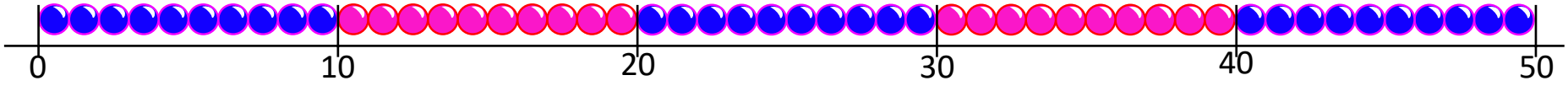


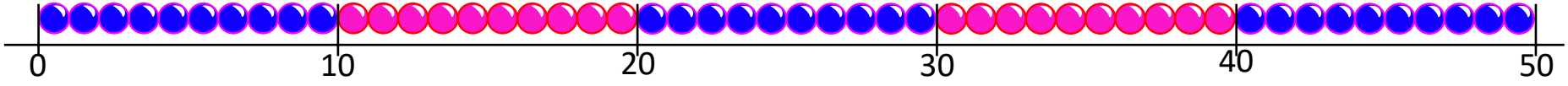
3. How many 5s are in 45? ☐

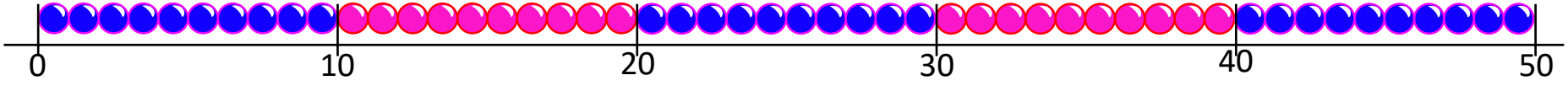


Investigation
Ring the fives









Check your understanding:
Questions

How many 5s are in 30?
How many 2s are in 16?
How many 3s are in 12?

I need 40 buns. They are 10 buns in each pack. How any packs do I need?
I need 20 apples. They come in packs of 5. How many packs do I need?
I need 15 peppers. They come in packs of 3. How many packs do I need?

Fill in the missing numbers.
□ x 10 = 50
20 ÷ 4 = □
□ ÷ 3 = 10

Fold here to hide answers:

Check your understanding:
Answers

How many 5s are in 30? 6
How many 2s are in 16? 8
How many 3s are in 12? 4

I need 40 buns. They are 10 buns in each pack. How any packs do I need? 4
I need 20 apples. They come in packs of 5. How many packs do I need? 4
I need 15 peppers. They come in packs of 3. How many packs do I need? 5

Fill in the missing numbers.
5 x 10 = 50
20 ÷ 4 = 5
30 ÷ 3 = 10