Summer term week 5 w/b 18th May 2020

(NB continual work to practise multiplication tables and learning to tell the time)

BBC Bitesize also have some good revision lessons to look at (these include lessons for English and the Stone Age).

All these strategies can be found on Brookside you tube channel.

https://www.youtube.com/channel/UC-JJXZ7S29swCgB1WUVPR_A

This week we will focus on SHARING. Sharing is closely linked to fractions e.g. To find half of 12 you share 12 into 2 equal parts (12 ÷ 2 = 6). Sharing uses different maths vocabulary to grouping but the answers would be the same!

Knowing the difference between sharing and grouping is important when solving problems. The easiest ways to think about it is:

SHARING: you know how many groups there are and need to find out how many in each group e g: 20 ÷ 4 share 20 equally into 4 groups (we know there are 4 groups because it says ÷4)

5	5	5	5

How many in each group? 5

GROUPING: you know how many are in each group and need to find out how many groups there are e.g. 20 ÷ 4
Each group has 4 in it. How many groups are there?

4	4	4	4	4
1 group	2 groups	3 groups	4 groups	5 groups

How many groups? 5

Dividing by 10 and 100

The opposite of x10 and 100 where a number gets 10 or 100 times SMALLER. Again, we don't just take a zero (or 2 zeros) away we have to move the digits either 1 or 2 places.

Example 1:

50 ÷ 10 = 5

T	O	
5	0	(1 zero move 1 place)
	5	

Example 2:

300 ÷ 100 = 3

H	T	O	
3	0	0	(2 zeros move 2 places)
		3	

Now have a go at these:

1) 60 ÷ 10	1) 110 ÷ 10
2) 80 ÷ 10	2) 300 ÷ 10
3) 100 ÷ 10	3) 450 ÷ 10
4) 500 ÷ 10	4) 200 ÷ 100
5) 400 ÷ 100	5) 1000 ÷ 100

Partitioning in different ways

Partitioning (or parting) numbers in different ways can help in division to find the best combination of numbers that can easily be divided by another number

Example 1

36 ÷ 4

You can partition 36 into:

30 + 6

20 + 16

10 + 26

Which pair can both be divided by 4?

20 + 16

(20 and 16 are both in the 4 times table)

NB numbers can be partitioned in lots of different ways e.g 35 + 1; 34 + 2 etc but to be efficient with larger numbers we just focus on different combinations of tens and ones.

Example 2:

72 ÷ 6

You can partition 72 into:

10 + 62

20 + 52

30 + 42

40 + 32

50 + 22

60 + 12

70 + 2

Which pair can both be divided by 6?

30 + 42 AND 60 + 12

You would choose 60 + 12 to divide by 6 because it is easier!

60 ÷ 6 = 10 and 12 ÷ 6 = 2 so

72 ÷ 6 = 10 + 2 = **12**

Now have a go at these: (you don't need to work it out just identify the pairs that can easily be divided by the number given – there may be more than one!)

1) 24 ÷ 2	1) 32 ÷ 4
2) 36 ÷ 3	2) 56 ÷ 4
3) 36 ÷ 4	3) 78 ÷ 6
4) 32 ÷ 2	4) 96 ÷ 8
5) 35 ÷ 5	5) 84 ÷ 7

Sharing (step 1)

Example 1:

12 ÷ 4 = 3 (12 divided in to 4 groups because you are dividing by 4)

1 1 1	1 1 1	1 1 1	1 1 1
3	3	3	3

You can check the answer by using the inverse 4 x 3.

Example 2:

36 ÷ 4 = 9

Sharing one at a time isn't efficient so you could partition 36 in to 20 and 16 (because they are both divisible by 4) then share the 20 then share the 16.

5 + 4	5 + 4	5 + 4	5 + 4
9	9	9	9

You can check the answer by using the inverse 4 x 9.

Now have a go at these:

1) 16 ÷ 4
2) 21 ÷ 3
3) 15 ÷ 5
4) 18 ÷ 2
5) 25 ÷ 5

1) 36 ÷ 2
2) 45 ÷ 5
3) 48 ÷ 6
4) 64 ÷ 8
5) 72 ÷ 9

Sharing (step 2)

Example 1:

33 ÷ 3 = 11

Partition 33 into 30 and 3 (both divisible by 3)

First share 30 (10 in each) then the 3. You can use the diennes notation as well if you need to (10 = ▯ and 1 = x)

10 + 1	10 + 1	10 + 1
11	11	11

You can check the answer by using the inverse 3 x 11

Example 2:

72 ÷ 6 = 12

Partition 72 into 60 and 12 (**NOT** 70 and 2) as they are both in the 6 times table).

You can remind children at this point about the previous lesson on partitioning in different ways – this is building on previous learning.

10 + 2	10 + 2	10 + 2	10 + 2	10 + 2	10 + 2
12	12	12	12	12	12

You can check the answer by using the inverse 6 x 12

Now have a go at these:	
1) 26 ÷ 2 2) 36 ÷ 3 3) 55 ÷ 5 4) 42 ÷ 3 5) 34 ÷ 2	1) 48 ÷ 4 2) 52 ÷ 4 3) 65 ÷ 5 4) 84 ÷ 6 5) 96 ÷ 6

Extra Challenge:

Word problems:

The problems below are a mixture of sharing and grouping word problems. Often, we teach the children to draw a picture to develop their understanding of how to solve these problems e.g.

Example 1:

Mrs Bodycote bought 40 cream cakes to share with her friends. She carried them in boxes of 10. How many boxes did she have?

$\boxed{10}$ $\boxed{10}$ $\boxed{10}$ $\boxed{10}$ = 4 boxes (a grouping word problem)

Example 2:

Farmer Jones had 3 fields and 12 cows shared equally between the fields. How many cows were in each field?

Field 1	Field 2	Field 3
4 cows	4 cows	4 cows

= 4 cows (a sharing word problem)

Now try these:

1. David took fifteen stickers to school, to give them out to his three best friends. How many did they get each?
2. There were 24 pens in a pot and three children to share them. How many did they get each?
3. Lauren bought 20 bottles of pop for her party. She carried them home in boxes of 5. How many boxes will she need?
4. There were 20 children going to the cinema in cars. 2 children could fit in each one. How many cars were needed?
5. Mum has a bottle of medicine which holds 16ml. How many days will it last if Sarah has 4ml of the medicine each day?

Slightly harder numbers:

1. David took forty two stickers to school, to give them out to his three best friends. How many did they get each?
2. There were 78 pens in a pot and six children to share them. How many did they get each?
3. Lauren bought 72 bottles of pop for her party. She carried them home in boxes of 8. How many boxes will she need?
4. There were 81 children going to the cinema in cars. 9 children could fit in each one. How many cars were needed?
5. Mum has a bottle of medicine which holds 56ml. How many days will it last if Sarah has 4ml of the medicine each day?

Answers:

Dividing by 10 and 100:

1) 6	1) 11
2) 8	2) 30
3) 10	3) 45
4) 50	4) 2
5) 4	5) 10

Partitioning in different ways:

1) 20 + 4; 10 + 14	1) 20 + 12
2) 30 + 6;	2) 40 + 16; 20 + 36
3) 20 + 16	3) 60 + 18; 30 + 48
4) 30 + 2; 20 + 12; 10 + 22	4) 80 + 16; 40 + 56
5) 30 + 5; 20 + 15; 10 + 25	5) 70 + 14

Sharing (1)

1) 4	1) 18
2) 7	2) 9
3) 3	3) 8
4) 9	4) 8
5) 5	5) 8

Sharing (2):

1) 13 2) 12 3) 11 4) 14 5) 17	1) 12 2) 13 3) 13 4) 14 5) 16

Word problems:

1) 5 stickers 2) 8 pens 3) 4 boxes 4) 10 cars 5) 4 days	1) 14 stickers 2) 13 pens 3) 9 boxes 4) 9 cars 5) 14 days (2 weeks)