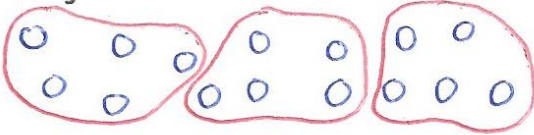
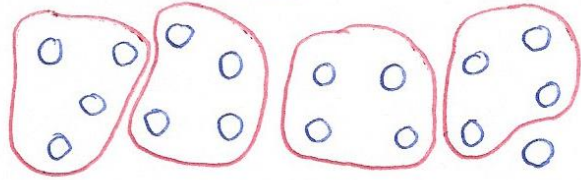


Division Activity C

<p>1</p> $\begin{array}{r} 3 \\ 7 \overline{) 21} \end{array}$	<p>2</p> <p>Sometimes when we are dividing a number it doesn't divide in evenly or exactly.</p> <p>When we say $15 \div 3$ this divides evenly because if we split 15 into 3 groups each group will have 5 with none left over like this:</p> 
<p>Last week we were working on dividing using our new division symbol like the one in the box above.</p>	

<p>3</p> <p>But what if we try $17 \div 4$?</p> <p>Well if we try to split 17 into 4 equal groups we get 4 in each group but there is one left over. It doesn't divide evenly. The 1 that is left over is called the remainder.</p> 	<p>4</p> <p>To show a remainder in an answer we write it like this:</p> $17 \div 4 = 4r1$ <p>Or:</p> $4 \overline{) 17} \begin{array}{l} 4r1 \end{array}$ <p>The small r stands for remainder</p>
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This page from Planet Maths explains it as well:

Dividing with remainders

There are 9 buns in a pack. Laura shares them equally among 4 children. How many will they each get? How many buns are left over?



How many buns does each child get? **2** How many buns are left over? **1**

We write this as **2 r 1**.

r means remainder.

This sum can be written as $9 \div 4 = 2r1$ or $4 \overline{) 9} \begin{array}{l} 2r1 \end{array}$

Now have a try at these dividing with remainders sums:

1. $18 \div 3 = \underline{\quad}$ 2. $7 \div 3 = \underline{\quad}$ 3. $8 \div 4 = \underline{\quad}$ 4. $11 \div 5 = \underline{\quad}$
 5. $7 \div 5 = \underline{\quad}$ 6. $22 \div 10 = \underline{\quad}$ 7. $21 \div 5 = \underline{\quad}$ 8. $17 \div 4 = \underline{\quad}$

Now in the boxes below or on a sheet try these sums again but write them using the other division sign $\overline{\hspace{1cm}}$

1	2	3	4
5	6	7	8

Division Activity D

We can also use our remainders and new division sign to help us divide bigger numbers.

1	2
$7 \overline{)84}$	$7 \overline{)84} \begin{array}{c} 1 \\ \hline \end{array}$
<p>Look at the sum $84 \div 7$</p> <p>In the box above it is written out using our new division sign.</p> <p>84 is made up of 8 tens and 4 units so to make it easier we can divide the 8 tens first and then divide the units.</p>	<p>So if I divide 8 by 7 or divide 8 into 7 groups there will be one in each group. So I can write 1 above the number 8.</p> <p>But there is also a remainder if I divide 8 by 7. The remainder is 1. Where will that go?</p>

3	4
$7 \overline{)84}$	$7 \overline{)84}$
<p>I take that remainder and put it in with the units to make 14.</p> <p>You can see where the remainder has been moved to the units in the sum above – it's written in red.</p>	<p>Now I divide my units by 7. I did have 4 units but now I have 14 because of the remainder from the 8.</p> <p>So 14 divided by 7 is 2. It divides in evenly with no remainder. So I just write 2 above the 14.</p> <p>Now I can see that my answer for the sum $84 \div 7 = 12$</p>

If you click on the picture below you can see the steps in doing division this way. The second example uses a bigger number but the ideas are the same!



Now have a try at dividing these larger numbers yourself using this quick method:

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| 1. $2 \overline{)32}$ | 2. $5 \overline{)70}$ | 3. $6 \overline{)96}$ | 4. $3 \overline{)54}$ | 5. $7 \overline{)98}$ |
| 6. $4 \overline{)68}$ | 7. $6 \overline{)84}$ | 8. $3 \overline{)57}$ | 9. $4 \overline{)76}$ | 10. $8 \overline{)96}$ |

And see if you can work out these last 5 – they are larger numbers but they also have a remainder!

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. $3 \overline{)82}$ | 2. $4 \overline{)58}$ | 3. $8 \overline{)95}$ | 4. $7 \overline{)88}$ | 5. $5 \overline{)95}$ |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|