

Maths- 4.5.20

Here are your maths tasks for this week- please use the book provided to complete the tasks ☺ We normally do maths Monday-Thursday, with Friday being our day for Mathletics and Times table rockstars to consolidate other areas of learning. Please see the Times table sheet for suggested activities. I've attached an arithmetic paper for Friday to complete this week too ☺

Monday

This week in maths, we will be focusing on multiplication and division, factor pairs and problem solving. Today, we will be looking at using our multiplication grids to work out problems with 2 or 3 digit numbers. Remember, when we are solving problems we must read the problem first. Then, we must think about reading the question. Then, we underline the important information. Then, we work out the problem and we can check by doing the inverse e.g. divide the biggest number and the smallest number. Below is the method we use:

$23 \times 6 =$ ① We start by partitioning the 2 digit number into tens and ones and put this into a grid like this

| | |
|------------|----|
| 20 | 3 |
| $\times 6$ | |
| 120 | 18 |

② I don't know 20×6 , but I know $2 \times 6 = 12$ and because it's 20, we 'x' 12 by 10 to make 120.

③ Then, I add $120 + 18$ to get my answer ☺

| |
|------|
| 120 |
| + 18 |
| 138 |

$131 \times 3 =$ ① Start by partitioning the 3 digit number into hundreds, tens and ones and put them into a grid like this.

| | | |
|------------|----|---|
| 100 | 30 | 1 |
| $\times 3$ | | |
| 300 | 90 | 3 |

② Now, I don't know 100×3 , but I know $1 \times 3 = 3$ and because it's 100 I 'x' 3 by 100 = 300. I also don't know 30×3 , but I know $3 \times 3 = 9$, but as it's 30, I 'x' 9 by 10 = 90.

③ Then add 300, 90 and 3 for your answer ☺

| |
|------|
| 300 |
| + 90 |
| + 3 |
| 393 |

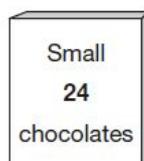
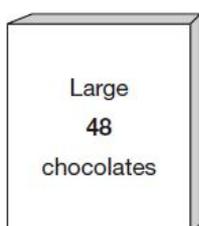
Task:

- Miss Cable had 7 bags of sweets. In each bag there was 35 sweets, how many sweets did she have altogether?
- If a baker bakes 152 loaves of bread every day, how many will he have baked in 7 days?
- At a theme park, 592 people each paid an £8 entrance fee. How much did the park make from these people?
- Charlie has packed his soldiers into 4 boxes ready to move house. In each box he has managed to pack 365 soldiers. How many soldiers does Charlie have altogether in the boxes?

Challenge:

Ken buys 3 large boxes and 2 small boxes of chocolates.

Each large box has 48 chocolates. Each small box has 24 chocolates.



How many **chocolates** did Ken buy altogether?

Tuesday

Today, we will be completing some division word problems using the 'short division' method. Remember, when we are solving problems we must read the problem first. Then, we must think about reading the question. Then, we underline the important information. Then, we work out the problem and we can check by doing the inverse e.g. divide the biggest number and the smallest number. Below is the method we use, please bare in mind that some children can do this in their heads using their times tables knowledge so they may not need to do the 'dots' but if they are less confident, please do use this method.

726 ÷ 3 =

① First, we set out the sum in the short division method. Underneath the '7' we would put 7 dots. We then group the 7 dots into 3's. We get 2 groups of 3 and 1 left which we carry over.

② We then repeat this method, putting the dots under the numbers and grouping into 3's.

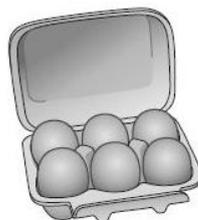
Task:

| | |
|--|---|
| 1. I have 726 cupcakes to sell at the fair. The fair lasts for 3 days. How many do I want to sell each day? |  |
| 2. There are 484 children in the school. They need to be split into 4 groups. How many children will there be in each group? |  |
| 3. Five hundred and nineteen penguins need to be put into 3 pools. How many will go in each pool? |  |
| 4. There are 847 Anglo-Saxons living in 7 villages. How many live in each village? |  |
| 5. There are 964 potatoes in the bags and 4 enormous pans in the kitchen. How many potatoes will the chef put in each? |  |
| 6. There are 309 paint brushes in the cupboard and 3 trays for them. How many paint brushes should go in each tray? |  |

Challenge:

A farmer is packing eggs.

Each box holds **six** eggs.



The farmer has 980 eggs to pack.

How many boxes can the farmer **fill** using 980 eggs?

full boxes

Wednesday

Today, we will be looking at factor pairs. A factor pair is a set of 2 numbers, that when multiplied together gives an answer e.g. $1 \times 4 = 4$, but also $2 \times 2 = 4$. Here is a website with some more examples:

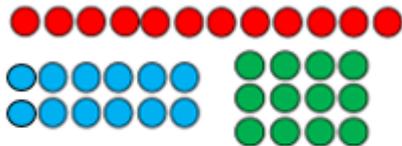
<https://www.splashlearn.com/math-vocabulary/fractions/factor-pairs>

Task:

Watch the video below and then see if you can answer the questions below:

<https://www.youtube.com/watch?v=WhelmWxYrAw>

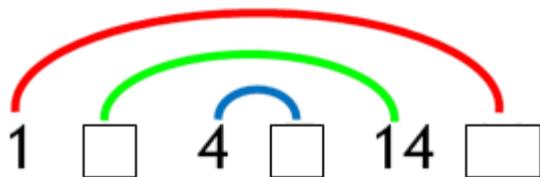
1 What factor pairs for 12 do these arrays show?



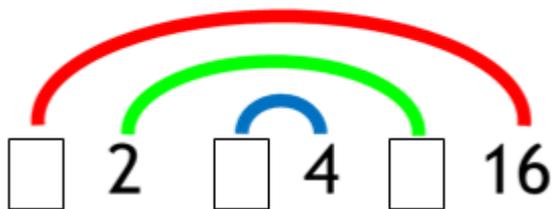
Use counters to create arrays for 24. How many factor pairs can you find?

2. Complete these factor rainbows.

This rainbow is for 28.



This rainbow is for 16.



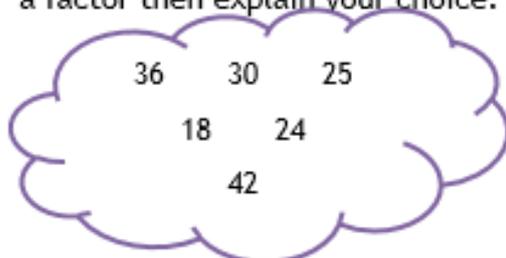
3. Draw your own factor rainbow for 20.

4. Draw your own factor rainbow for 48.

Challenge:

Odd One Out

Circle the number which does not have 6 as a factor then explain your choice.



Thursday

Today, we will be looking at multiplying 3 numbers together. This is something that we should be able to do mentally, however, if we do need to use the grid method (see Monday's work) then that is also completely fine! To do this, we always multiply the first two numbers and then the answer, we multiply by the last number:

$$\begin{array}{l} 2 \times 4 \times 6 = \\ \swarrow \quad \searrow \\ 8 \times 6 = 48 \end{array}$$

Task:

Try to work out these sums below using the method above.

1. $5 \times 5 \times 3 =$
2. $3 \times 4 \times 2 =$
3. $6 \times 7 \times 3 =$
4. $4 \times 2 \times 8 =$
5. $8 \times 4 \times 2 =$
6. $10 \times 4 \times 3 =$
7. $6 \times 4 \times 7 =$
8. $6 \times 6 \times 5 =$
9. $2 \times 3 \times 4 =$
10. $8 \times 4 \times 6 =$

Challenge:

Is this true or false?

$$7 \times 6 = 7 \times 3 \times 2$$

$$7 \times 6 = 7 \times 3 + 3$$

Explain your answer to a friend. Prove using a drawing.

Friday

TT rockstars/Mathletics/Arithmetic test ☺

Help for this week

For multiplication and division, it's all very much practising the skills and repetition to ensure that your child has the method in their head. Giving them some numbers and applying it to the method is just as good as any other practise, even if it is just simple sums! Here's some extra help below.

Multiplication

You could start off with doing some work on partitioning numbers to ensure that they understand the value of the numbers before moving onto the multiplication grid and applying this learning. To do this you could look at for example the number 56. Ask them- **how many tens has this number got? How many ones?** You could get them to place the number in a place value chart:

|  PLACE VALUE CHART | | | |
|---|----------|------|------|
| Thousands | Hundreds | Tens | Ones |
| 1,000s | 100s | 10s | 1s |
| | | | |

Discuss with the children what 50 might look like, it can't just be '5' as this is 5, not 50. Move the digits around and then ask what they are worth now and what they look like e.g. move the 5 to hundreds- how would we write this number?

- You could even make the numbers using place value arrows:
<https://www.ictgames.com/mobilePage/arrowCards/> and then they can physically pull the numbers apart to see what they are made of.
- Multiplying by 10 and 100- Again I would use a place value chart here and say to the children to put their number in the chart. Multiplying by 10 is moving the number along '1' to the left of the grid, making the number 10 times bigger. Moving the number along 2 x left would be 100 times bigger. But then explaining that you need '0' after the number otherwise it would still just be a ones number.

Division

- Using the dots will help most children to group the number into specific numbers, however if your child needs physical dots, then cutting out circles with paper is a great resource as they can then stack them into groups too.

Websites for online games:

<https://www.topmarks.co.uk/maths-games/7-11-years/multiplication-and-division>

<https://nrich.maths.org/8956> - Challenges for those who may have found this week slightly easy.