

**Summer Week 11 Lesson 1 – 09.07.20**

For the final two weeks of the summer term we will be setting you problem solving activities that require you to use a range of your maths skills.

Because the activities may be quite varied, there will be no models on these sheets. However, there will be further explanations on the daily videos. As in previous weeks, the activities will get progressively more challenging.

At the end of each of these activities is a link to where you can read example answers submitted by other children.

Today the focus is DIVISION

**ANSWERS IN RED**

**STARTER**



Lola bought 8 toys. She paid **£2.65**. How many **coin combinations** could she use to make this amount?

**Various answers:**

**Example: £1 + £1 + 50p + 10p + 5p**

**Now choose 3 activities to try!**

**ACTIVITY 1 STEPPINGSTONE ACTIVITY**

**The Amazing Splitting Plant**

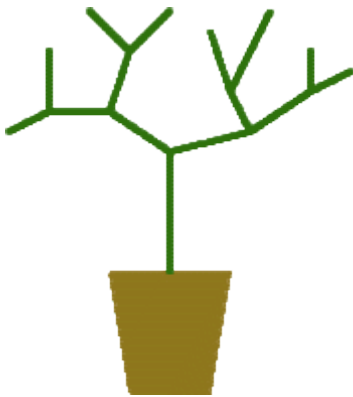
The splitting plant grows in a special way.

In the first week, the stem splits into two branches.

In the second week, each of these two branches split into another two branches - making four branches altogether.

This keeps happening every week, until at the end of the sixth week each branch grows a flower.

How many flowers will the plant have?



Week 1 = 2 branches

Week 2 = 4 branches

Week 3 = 8 branches

Week 4 = 16 branches

Week 5 = 32 branches

**Week 6 = 64 flowers**

**Share Bears**



Yasmin and Zach have some bears to share. Which numbers of bears can they share equally so that there are none left over? **2, 4, 6, 8, 10...**

Can they share one bear equally? **No**

Can they share two bears equally? **Yes**

Three bears? **No**

Four bears...? **Yes**

What do you notice about the numbers they can share fairly?

It might help to look at a number line and mark the numbers that do share fairly onto it. Do you notice a pattern?

**They are all even numbers**

**ACTIVITY 3 MILD/SPICY**

**Growing Garlic**

Ben is on the allotment with his Mum. They would like to grow some garlic and are deciding how to plant the garlic cloves.

Ben arranges the cloves into three rows and finds that he has one spare clove. How many cloves might he have had to start with?

**Ben might have started with a number 1 more than a multiple of 3 because it says when Ben put the garlic into groups of 3 there was 1 garlic plant left. For example Ben could have started with 7.**

Ben plants cloves of garlic in two rows and has one clove left over. So he tries again.

He plants cloves in three rows and has one left over. So he tries again.

He plants cloves in four rows and has one left over. So he tries again.

He plants cloves in five rows and has one left over. So he tries again.

He plants cloves in six rows and has one left over.

We know that he has fewer than 100 garlic cloves. How many did he have?

**Less than 100:**

**Various answers:**

**The Number of garlic cloves equals a Multiple of number of rows 2, 3, 4, 5, 6) and then plus 1.**

**E.g. 6 rows of 10. So the Number is  $60 + 1 = 61$**

You could think about how many cloves he might have had if there were more than 100.

**More than 100:**

**Various answers:**

**60 garlic cloves in each row**

**2 rows**

**$60 \times 2 = 120$**

**$120 + 1 = 121$**



## Lots of Lollies

Frances and Rishi were given a bag of lollies.



They shared them out evenly and had one left over.

Just as they had finished sharing them their friends Kishan, Hayley and Paul came along. They wanted some lollies too so the children shared them out again between all of them. This time they had two lollies left over.

How many lollies could there have been in the bag?

If the two children end up with one lolly it must be an odd number of lollies.

### **Poppy's route was a perfect solution**

If the two children end up with one lolly it must be an odd number of lollies. Then three more children come making the total number of children 5. Say they had 1 lolly each when they shared them, the number of lollies would be 7 because 1 times 5 is 5 add on 2 for the left over ones and it makes seven. If we carry this on to 10 lollies each it shows:

1 lolly each - 7 lollies

2 lollies each - 12 lollies

Canonbury Home Learning

3 lollies each - 17 lollies

4 lollies each - 22 lollies

5 lollies each - 27 lollies

6 lollies each - 32 lollies

7 lollies each - 37 lollies

8 lollies each - 42 lollies

9 lollies each - 47 lollies

10 lollies each - 52 lollies

**ACTIVITY 5 HOT**

**The Deca Tree**

In the forest there is a Deca Tree.

A Deca Tree has 10 trunks,



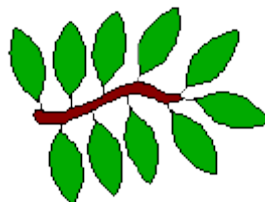
and on each trunk there are 10 branches,



and on each branch there are 10 twigs,



and on each twig there are 10 leaves:



One day a woodcutter came along and cut down one trunk from the tree.

Then he cut off one branch from another trunk of the tree.

Then he cut off one twig from another branch.

Finally he pulled one leaf from another twig.

How many leaves were left on the tree then?

Canonbury Home Learning

There are 10 leaves per twig

There are 10 twigs per branch

$10 \text{ leaves} \times 10 \text{ twigs} = 100 \text{ leaves per branch}$

There are 10 branches per trunk

$100 \text{ leaves} \times 10 \text{ branches} = 1000 \text{ leaves per trunk}$

There are 10 trunks per tree

$1000 \text{ leaves} \times 10 \text{ trunks} = 10\,000 \text{ leaves on the tree}$

Cut off one trunk:  $10\,000 - 1000 = 9000 \text{ leaves left}$

Cut off one branch:  $9000 - 100 = 8900 \text{ leaves left}$

Cut off one twig:  $8900 - 10 = 8890 \text{ leaves left}$

Pull off one leaf:  $8890 - 1 = 8889 \text{ leaves left}$

There are 8889 leaves left on the tree.