

**Friday lesson 4** | Year 4

# Starter - Can you solve these problems?

Dave was on the phone to his Gran for three hours and 24 minutes. How long was this in minutes?

Choose four digits. Make the highest and lowest numbers that you possibly can. Then subtract the smallest number from the largest using column method.

Calculate the following:

$$-3 + 5 =$$

$$-4 + 10 =$$

$$-10 + 6 =$$

$$3 - 4 =$$

$$-5 - 6 =$$

The Ryan family have a gift voucher of £110 to spend on rides at Waterworld. All the rides cost £9 per person. How many rides can the Ryan family take between them?

# Answers – How many did you get right?

Dave was on the phone to his Gran for three hours and 24 minutes. How long was this in minutes?

222 minutes

Choose four digits. Make the highest and lowest numbers that you possibly can. Then subtract the smallest number from the largest using column method.

Accept any reasonable answer

$$-3 + 5 = 2$$

$$-4 + 10 = 6$$

$$-10 + 6 = -4$$

$$3 - 4 = -1$$

$$-5 - 6 = -11$$

The Ryan family have a gift voucher of £110 to spend on rides at Waterworld. All the rides cost £9 per person. How many rides can the Ryan family take between them?

12 rides



## Learning Objective:

How can I solve word problems with division?

## Success Criteria:

- Read questions carefully to make sure all steps are calculated.
- Solve single step problems
- Solve multi-step problems
- Show your working out.

## Vocabulary:

Read

Understand

Choose

Solve

Answer

Check





*Read the question.  
What is the important  
information?*



*Understand the question.  
What do you need to find out?*



*Choose the correct method of calculation and operation(s).*



*Solve the problem.  
Make sure you follow the steps.*



*Answer the question.  
What were you meant to  
find out?*



*Check your answer.  
Use the inverse to check your  
working out.*

# ONE-STEP DIVISION WORD PROBLEM: EXACT ANSWER

A group of 48 children is divided into groups of 6 children.  
How many groups will be formed?

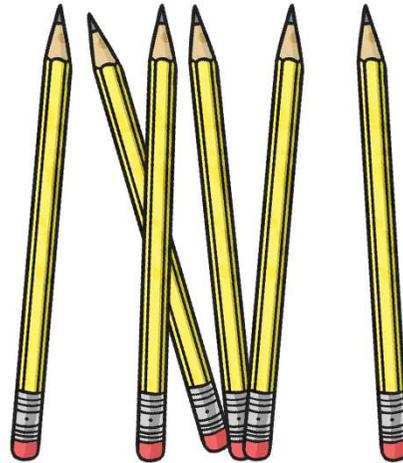


$$48 \div 6 = 8$$

There will be 8 groups.

# ONE-STEP DIVISION WORD PROBLEM: REMAINDER NOT USED

A pot holds 6 pencils.  
How many full pots can be made from 51 pencils?



$$51 \div 6 = 8 \text{ r}3$$

The remainder is not used.  
8 pots will be filled with 6 pencils.

# WORD PROBLEMS AND REMAINDERS

When answering word problems with remainders, you need to look carefully at the question.

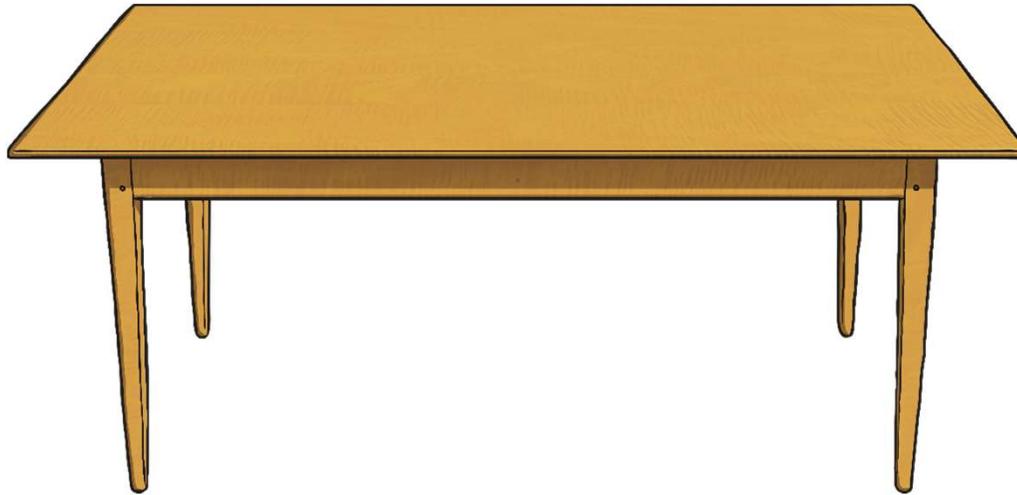
For example, if the answer to how many buses does Mr Clifford need to order for Year 5 school trip is  $5 \text{ r } 2$ , then he will need to order 6 buses as he cannot leave people behind.

However, if the answer to how many bags are full is  $6 \text{ r } 4$ , then there are 6 full bags as the remainder shows that the seventh bag is not yet full .

Look **CAREFULLY** at the what the question is asking you.

# ONE-STEP DIVISION WORD PROBLEM: REMAINDER USED

A table seats groups of 6 children.  
How many tables are needed for 45 children?

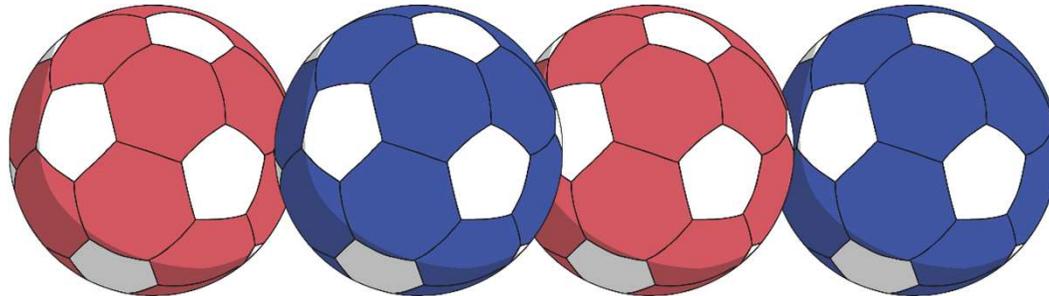


$$45 \div 6 = 7 \text{ r}3$$

The remaining children need a table.  
8 tables are needed.

## TWO-STEP DIVISION WORD PROBLEM: DIVISION FIRST

A sports shop has 3 packs of balls, each containing four balls. It also has 52 balls which are also made into packs of four balls.  
How many packs of four balls are there now?



**$52 \div 4 = 13$ ;  $13 + 3 = 16$**   
There are 16 packs of balls.

## Two-Step Division Word Problem: Division Second

There are 16 girls and 15 boys in a class. They are organised into tables of four. How many tables are needed to sit all of the children?



**$16 + 15 = 31$ ;  $31 \div 4 = 7 \text{ r}3$ ; the remainder is used.**  
8 tables are needed.

## Multi-Step Division Word Problem (1)

A toy shop has 3 bags of 12 marbles, and 6 bags of 8 marbles. The marbles are combined to make new bags of 15 marbles. How many full bags will be made?



$$12 \times 3 = 36;$$

$$8 \times 6 = 48;$$

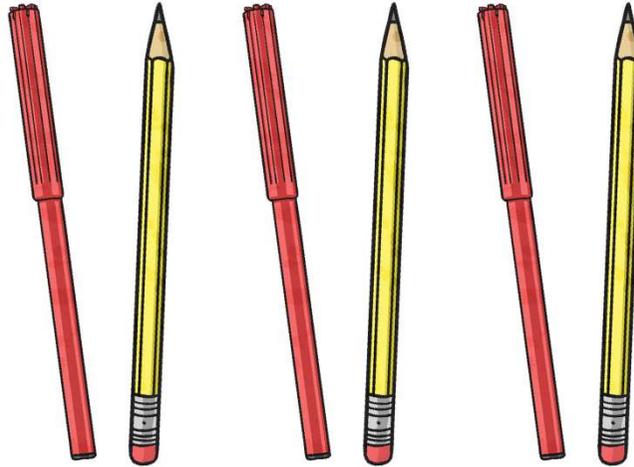
$$36 + 48 = 84;$$

$$84 \div 5 = 16 \text{ r}4$$

16 bags of 15 marbles will be made.

## Multi-Step Division Word Problem (2)

A teacher has 48 pencils and 27 pens. The teacher shares the pens and pencils equally into 6 pots. How many writing implements are shared into each pot?

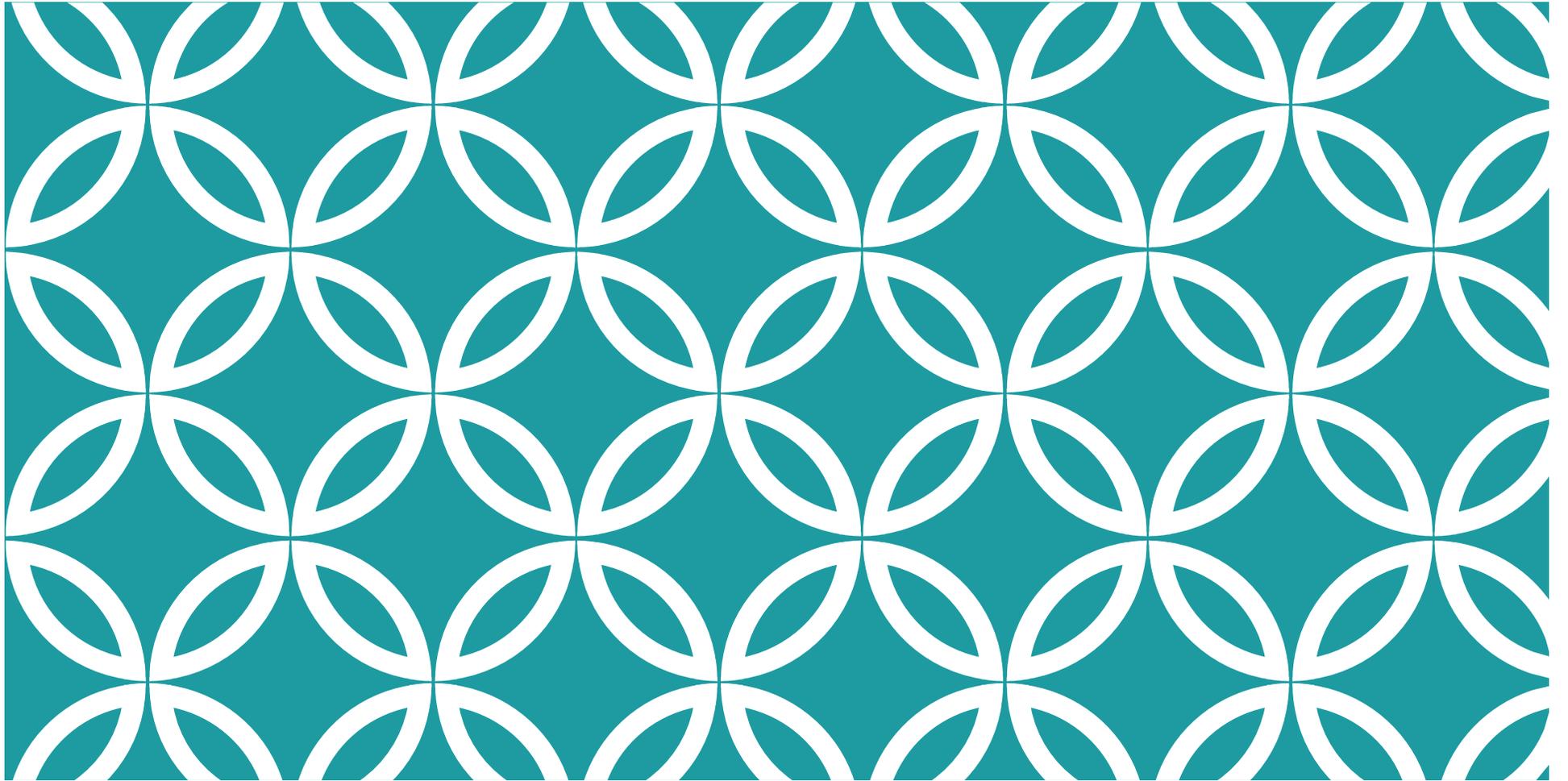


$$48 \div 6 = 8;$$

$$27 \div 6 = 4 \text{ r}3;$$

$$8 + 4 = 12$$

Each pot will have 12 writing implements.



**TASK SHEETS ARE  
ON THE WEBSITE** |

# PLENARY

➤ Multiples of 1000 have 4 digits.

Always, sometimes or never true?

Prove your answer.