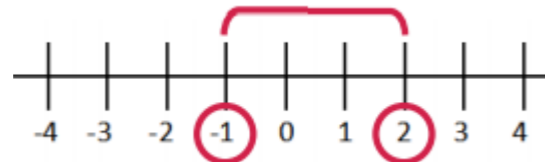


Year 5 Unit 14: Calculating with whole numbers and decimals (2 weeks)

Before you start...

- This unit provides lots of experiences for reviewing and extending understanding of:
 - Positive and negative numbers
 - Operations with numbers
 - Remainders after division

Video: Intervals across zero



$$14 \div 3 = 4 \text{ r}2$$

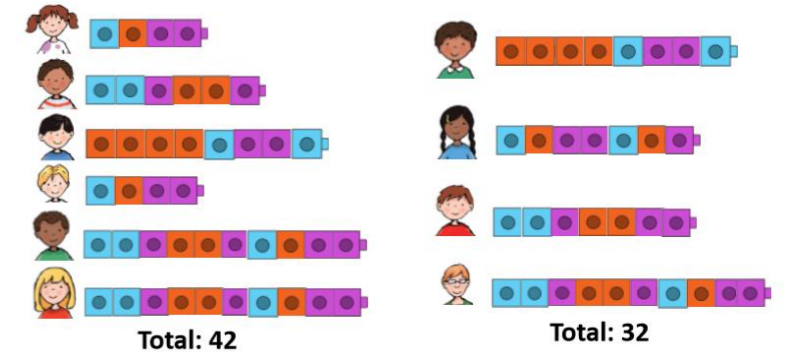
$$14 \div 3 = 4 \frac{2}{3}$$



Video: Interpreting remainders

Average

Mean average is not the only average. There are different statistics we can use to measure the average and it is important to think about when and why. We do not use mean average when thinking about average salary. Very high or very low salaries can drastically change the mean and so the median is used. The purpose is not to learn the process of finding the mean, the purpose is to explore why you might use it and what it can tell you.



Working with positive and negative numbers

L1 Calculate intervals across zero

Pupils calculate intervals across zero and visualise this using number line. Take the time to make connections with existing knowledge of calculations with positive values.

? What real-life experiences with negative values might pupils have? Do they know how negative values are used in different sports?

Negative numbers in context are suggested to be a part of Maths Meetings across the year. You may need to spend time exploring the idea of zero and what below zero or less than zero can mean. The positive and negative number task bank can support with this.

Interpreting remainders after division

L2&3 Explore remainders after division

These lessons provide opportunities to bring together experiences from across the year including fractions, decimals and rounding. Pupils explore different ways to interpret remainders after division, using the context to make sense of the answer.

? If you remove the numbers from the word problems, how will you support pupils to see the structure and still interpret remainders?

Introducing the idea of average

L4 Explore mean average

The year 6 objective of finding the mean average is introduced and explored in practical situations. Pupils think about possible purposes for finding the mean average and use all four operations when playing around with how to find it.

The activities from lesson 6 to 10 could be ideal for joint sessions with Year 6 or Year 4 – even if pupils have explored these ideas the year before.

The investigation lessons have lots of opportunities to extend across multiple lessons.

Investigating number

L6&7 Investigate consecutive numbers
L8&9 Investigate palindromic numbers
L10 Investigate multiples of 9

A series of investigations are used as a vehicle to explore the structure of number. When exploring consecutive numbers, pupils are given opportunities to seek patterns, connect addition and multiplication and communicate their thinking with manipulatives and words. Lesson 7 extends this investigation further and includes working with negative values

Pupils then explore numbers that are palindromes (they read the same backwards and forwards) and have opportunities to calculate using a variety of strategies. Pupils are encouraged to make conjectures, follow their own lines of enquiry and consider how to articulate and show their findings. Multiples of nine are explored with opportunities to pattern seek and revise a range of multiplication and division strategies.

? When working with investigations, being familiar with the maths involved is useful to support pupils and understand their lines of thought. What questions and prompts would you find useful?

Summing consecutive numbers

This video from NRICH provides a good starting point to think about consecutive numbers.



Solving problems involving money

L5 Reason and calculate in the context of money

The context of buying souvenirs is given to provide lots of opportunity to reason and calculate. Pupils work with decimal values in the context of money to find multiple solutions to problems, discussing efficiency.

? What models and images were used earlier in the year to show calculation strategies with decimals?