

Year 6 – Autumn Block 2 – Four Operations

18th May 2020

Part 3 – Reasoning & Problem Solving
Activities

WALT Find Common Factors
*Look out for my green notes
to help you!*

Reasoning 1

Investigate common factors to find the odd one out.

You may want to make a Venn diagram similar to the one in the last presentation (but with three circles) to help you with this.

72

24

49

Explain your reasoning.

Reasoning 1

Investigate common factors to find the odd one out.

72

24

49

Explain your reasoning.

49 is the odd one out because...

Reasoning 1

Investigate common factors to find the odd one out.

72

24

49

Explain your reasoning.

49 is the odd one out because it does not share the common factors 2, 3, 4, 6, 8, 12 and 24 with 72 and 24.

Problem Solving 1

Which pair of numbers has the most common factors?

18

45

32

16

Problem Solving 1

Which pair of numbers has the most common factors?

18

45

32

16

32 and 16 have the most common factors – 1, 2, 4, 8 and 16.

Reasoning 2

A rugby team are planning the seating for their stadium.

In each section, there will be 84 red seats and 132 blue seats.

Each row must have an equal number of chairs.

What is the largest number of chairs they can have in each row?

Prove it.

Find the highest common factor for both of these numbers to help you.

Reasoning 2

A rugby team are planning the seating for their stadium.

In each section, there will be 84 red seats and 132 blue seats.

Each row must have an equal number of chairs.

What is the largest number of chairs they can have in each row?

Prove it.

12 is the largest number of chairs they can have in each row because...

Reasoning 2

A rugby team are planning the seating for their stadium.

In each section, there will be 84 red seats and 132 blue seats.

Each row must have an equal number of chairs.

What is the largest number of chairs they can have in each row?

Prove it.

12 is the largest number of chairs they can have in each row because it is the largest common factor of 84 and 132. There will be 7 rows of red seats and 11 rows of blue seats.

$12 \times 7 = 84$ and $12 \times 11 = 132$

Well done! It's over to you now.

Go to Part 4 and choose your Star Challenge! Normal rules apply: page 1 will give you an easier challenge, page 2 will be about the same as what we've just practised and page 3 will be more of a stretch.

You only need to do the first set of questions on your chosen Star Challenge – the 'A' questions. If you want extra practice, you can then do the next set of questions – the 'B' questions. When you finish, don't forget to mark your answers before sharing, so I can see where you need help.