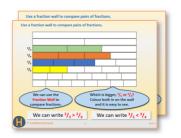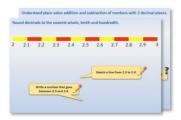# Year 6: Week 4, Day 3
Ratio (2)

Each day covers one maths topic. It should take you about 1 hour or just a little more.
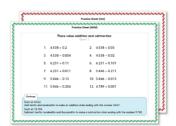
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.

   OR start by carefully reading through the **Learning Reminders**.

2. Tackle the questions on the **Practice Sheet**.
   There might be a choice of either Mild (easier) or Hot (harder)!
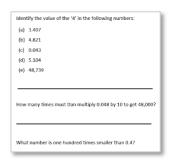   Check the answers.

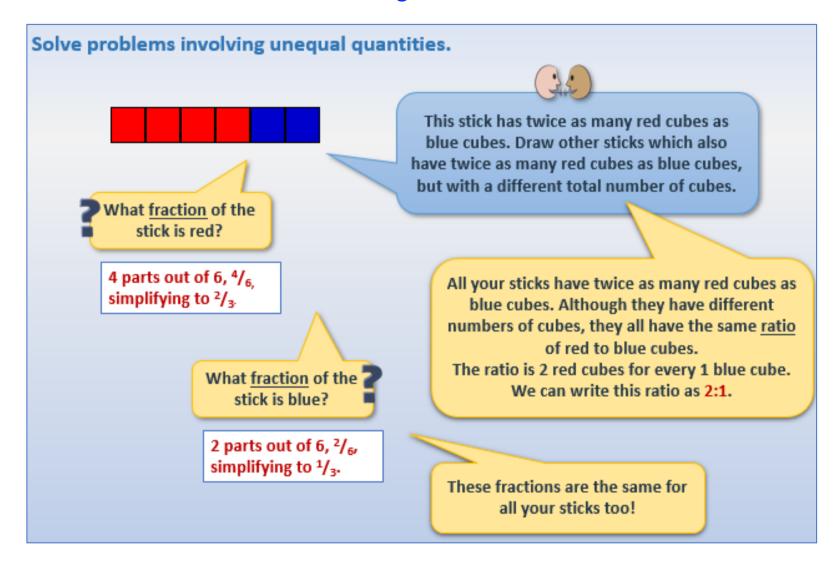3. Finding it tricky? That's OK… have a go with a grown-up at **A Bit Stuck?**

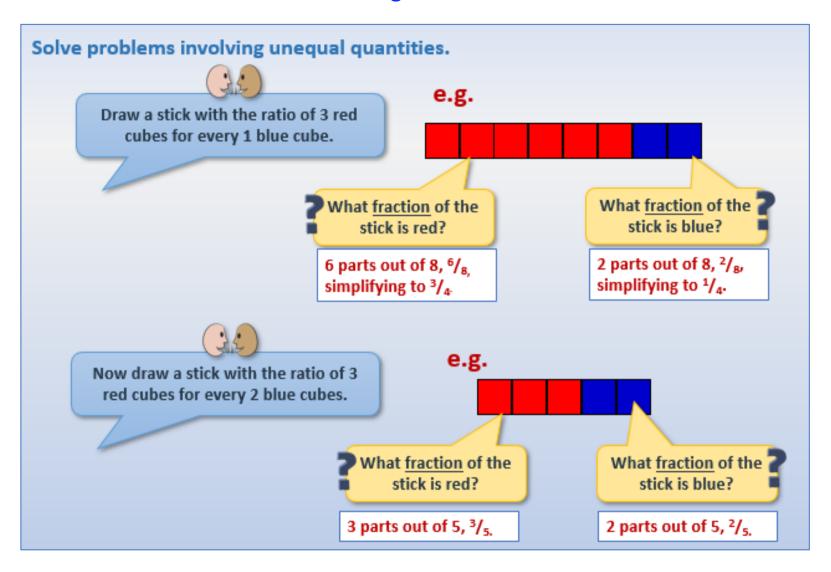4. Have I mastered the topic? A few questions to **Check your understanding**.
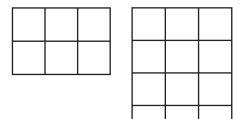   Fold the page to hide the answers!

Learning Reminders

Solve problems involving unequal quantities.

This stick has twice as many red cubes as blue cubes. Draw other sticks which also have twice as many red cubes as blue cubes, but with a different total number of cubes.

What fraction of the stick is red?

4 parts out of 6, $^4/_6$, simplifying to $^2/_3$.

What fraction of the stick is blue?

2 parts out of 6, $^2/_6$, simplifying to $^1/_3$.

All your sticks have twice as many red cubes as blue cubes. Although they have different numbers of cubes, they all have the same ratio of red to blue cubes.
The ratio is 2 red cubes for every 1 blue cube.
We can write this ratio as **2:1**.

These fractions are the same for all your sticks too!

Learning Reminders

Solve problems involving unequal quantities.

e.g.

Draw a stick with the ratio of 3 red cubes for every 1 blue cube.

What fraction of the stick is red?

6 parts out of 8, $^6/_8$, simplifying to $^3/_4$.

What fraction of the stick is blue?

2 parts out of 8, $^2/_8$, simplifying to $^1/_4$.

e.g.

Now draw a stick with the ratio of 3 red cubes for every 2 blue cubes.

What fraction of the stick is red?

3 parts out of 5, $^3/_5$.

What fraction of the stick is blue?
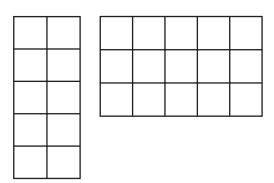
2 parts out of 5, $^2/_5$.
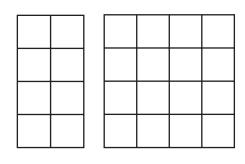
Practice Sheet Mild
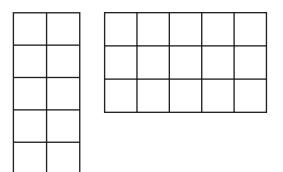## Ratio

Colour 2 red to 1 blue
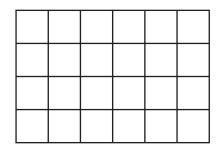
Colour 3 blue to 2 red

Colour 3 blue to 1 red

Colour 4 blue to 1 red

Colour 5 red to 3 blue

Challenge

Draw and colour your own different rectangle on squared paper for each ratio.
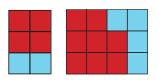
Practice Sheet Hot
Ratio word problems

1. In a class of 28 children, $\frac{1}{4}$ are aged 10 and $\frac{3}{4}$ are aged 11. How many are 10 and how many are 11? What is the ratio of 11 year old children to 10 year old children?

2. In a class of 27 children $\frac{2}{3}$ of children have school dinners and $\frac{1}{3}$ have packed lunches. How many have each? And what is the ratio?

3. There are 30 children in a class. There are twice as many boys as girls. How many boys and girls are there?

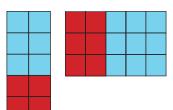4. If a year group of 60 children has the same ratio of boys to grils, how many boys and girls would there be?
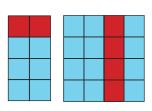
Practice Sheets Answers
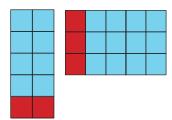
Ratio (mild)

Colour 2 red to 1 blue

Colour 3 blue to 2 red

Colour 3 blue to 1 red

Colour 4 blue to 1 red

Colour 5 red to 3 blue

Accept a of shadin there are 15 red squares and 9 blue squares (15:9 is equivalent to 5:3)

Ratio word problems (hot)

1. In the class of 28 children 7 are aged 10 and 21 are aged 11.
   The ratio of 11 year old to 10 year old children is 21:7 or 3:1

2. In a class of 27 children 18 have school dinners and 9 have packed lunch.
   The ratio is 18:9 or 2:1.

3. In the class there are 20 boys and 10 girls.

4. In a class of 60 there are 40 boys and 20 girls.
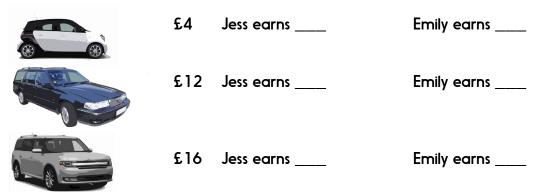
A Bit Stuck?
Car Wash

Things you will need:
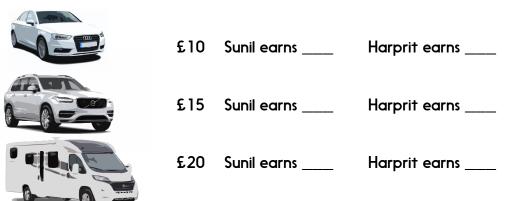- A pencil
- 20 pound coins

What to do:

- Jess and Emily wash Mum's car. They are paid £8. Jess takes £6 as she did most of the work and Emily has £2.
- Calcuate how much they each should be paid for washing these cars. They split the work up in the same way. Use the coins to help you.

£4   Jess earns _____   Emily earns _____

£12   Jess earns _____   Emily earns _____

£16   Jess earns _____   Emily earns _____

- Sunil and Harprit wash their big brother's car. They are paid £5. Sunil earns £3 and Harpit earns £2.
- Calculate how much they each should be paid for washing these cars. They split the work up in the same way.

£10   Sunil earns _____   Harprit earns _____

£15   Sunil earns _____   Harprit earns _____

£20   Sunil earns _____   Harprit earns _____

S-t-r-e-t-c-h:
What was the ratio of what Jess earned compared to Emily? ___ : ___
What was the ratio of what Sunil earned compared to Harprit? ___ : ___

Learning outcomes:
- I can solve ratio problems.
- I am beginning to describe the relationship between quantities as a ratio.

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Check your understanding
Questions

Harprit has coloured 2 squares in red and the rest in blue.
The ratio of red to blue squares is 1 to 2.
How many squares are blue?
How many squares has she coloured in total?

Faith has coloured 6 squares red and the rest in blue.
The ratio of red to blue is 3 to 1.
How many squares did she colour altogether?

Write three pairs of numbers with the ratio 3 to 2.

Fold here to hide answers

Check your understanding
Answers

Harprit has coloured 2 squares in red and the rest in blue.
The ratio of red to blue squares is 1 to 2.
How many squares are blue? 4
How many squares has she coloured in total? 6

Faith has coloured 6 squares red and the rest in blue.
The ratio of red to blue is 3 to 1.
How many squares did she colour altogether? 6 + 2 = 8

Write three pairs of numbers with the ratio 3 to 2.
e.g. 6 and 4, 9 and 6, 12 and 8