

# Maths - Year 5

## Calculating 10: Proportion and Ratio

### Key Vocabulary

Ratio	A way of comparing two or more quantities measured in the same units, e.g. if $a$ is 3 times as much as $b$ this comparison can be written as the ratio $a : b$ is 3 : 1.
Proportion	Used to express a fraction of a whole, e.g. the proportion of grapes in a bag that are green could be expressed as $\frac{1}{2}$ .
Scale drawing	An image of a real-life object that has had its dimensions enlarged or reduced in size using the same scale factor. A scale drawing is said to be 'in proportion' to the object it represents.

### Mathematical Skills

- Notice patterns when exploring ratios and different scales.
- Use knowledge of multiplying and dividing by powers of 10 when converting between measurements in different metric units.
- Apply knowledge of multiplying and dividing to create scale drawings.
- Use a ruler to draw lines to the nearest millimetre.

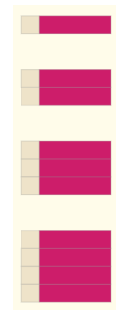
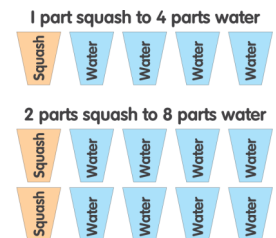
### Mathematical Methods

- Scaling a recipe e.g. turning a recipe for 18 cookies to one for 36 cookies.

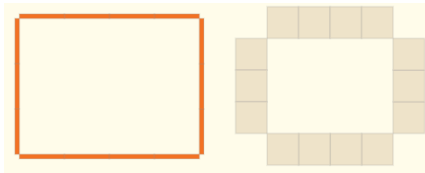
	Caster sugar	Butter	Flour	Golden syrup
18 cookies	100 g	100 g	200 g	5 g
36 cookies	100 g	100 g	200 g	5 g

- Exploring ratio in a real-life context.

Mix 1 part concentrate with 4 parts water	Dilute 1 to 10	1 part squash to 9 parts water	Shake first! We recommend diluting 1 part blackcurrant squash to 3 parts water
	Dilute 1:8	Dilute cordial 1:10	

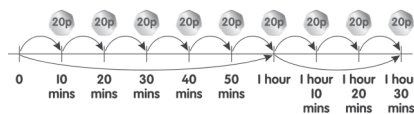


- Making scale drawings e.g. 10cm is scaled down to 1cm.

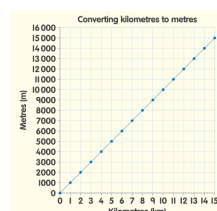


- Solving problems involving simple rates.

<p><b>Parking - Zone D</b>                  Mon - Sat (Excluding Bank Holidays)                  8am - 6pm                  Maximum stay 4 hours                  No return within 2 hours  <b>20p for 10 minutes</b></p>
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- Converting units of metric measurement e.g. km to m.

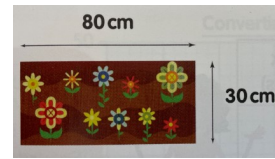


## Can you..?

- What would Ravi need to make 16 servings?



- Create a scale drawing using the scale: 2cm represents 10cm.



- It costs 50p to skate for 30 minutes. How much would it cost if you skated for 3½ hours?