## **Year 10 Mathematics Learning Journey: Unit 9 - Ratios and Fractions**

Step 6: Currency

conversion

Pounds to Canadian

dollars is £1 = \$1.70How many Canadian dollars can you get for £200?

Step 14: Mixed ratio problems

The ratio of the angles in a triangle is 3:4:5. Show that the triangle does not contain a right angle.

Step 13 (H): Ratio in volume problems

How can you find the ratio of the volumes of two shapes if you only know their surface areas?

Step 12 (H): Ratio in area problems

If we know the ratio of the areas of two shapes, how can we find the ratio of the lengths of their sides?

Step 11: Link ratios of algebra

x:y is equal to 5:3 Work out x and y if x - y =240

Step 7 (R): Link ratios and scales

On a street map of a town, 2cm represents 140 metres. Express the scale of the map as a ratio in its simplest form.

Step 8: Ratios of the form 1:n and n:1

Write the ratio £5:80p in the form n:1

Step 9: Solve 'best buy' problems

Which is better value: 4 litres of juice for £1.80 of 3 litres of juice for £1.50?

Step 10: Combine a set of ratios

The ratio of the number of cats to dogs in a pet shop is 2:5. The ratio of the number of dogs to rabbits in the shop is 3:10. Find the ratios of Cats:Dogs:Rabbits

Step 5 (R): Link ratios and graphs

If two variables are directly proportional, what will the graph look like?

Step 4: Make comparisons

Compare the ratios 3:2 and 3:4 Step 3 (R): Share in a ratio

The angles in a triangle are in the ratio 14:18:13. Find the size of the largest angle.

Step 2 (R): Link ratios and fractions

If a:b = 5:1 write down the fraction linking b to the whole.

Step 1 (R): Compare using a ratio

Write the ratio 3 hours: 45 minutes in simplest form.

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