Mathematics

Dividing into a ratio I
# Lesson 7 of 8

Miss Kidd-Rossiter

Try this

Antoni and Binh have fundraised £60 to donate to two charities. How do they split the money so that

- one donation is £4 more than the other donation?

- one donation is four times as much as the other donation?

- one donation is $\frac{1}{3}$ of the total.

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Connect

We can represent dividing £60 in the ratio 1 : 5 using a bar model.
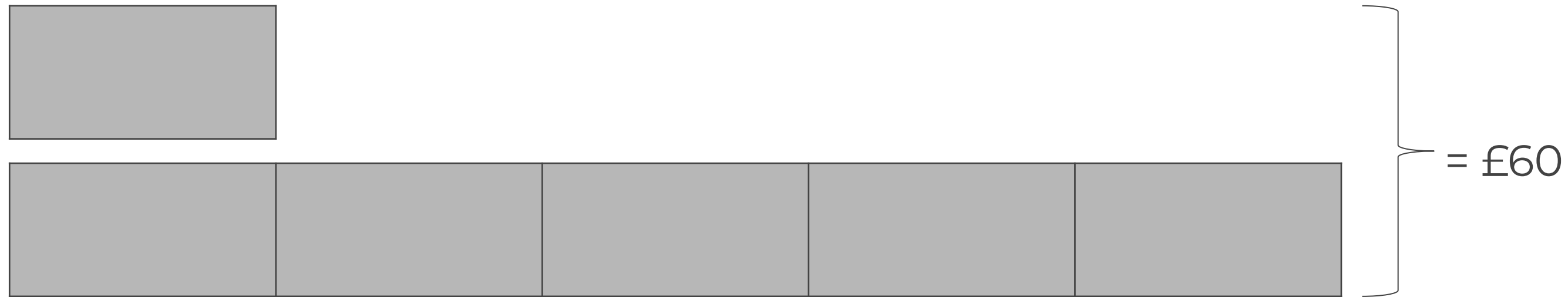
= £60

Now draw your own bar models to represent dividing £60 between two charities in the ratios below:

1 : 4   2 : 8

Each time, work out the fraction of the whole £60 that each charity receives.

Connect

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$$1 : 4 \qquad 2 : 8$$

Each time, work out the fraction of the whole £60 that each charity receives.

Independent task

1. Share a donation of £120 in each of these ratios.

a. $1 : 1$

b. $1 : 2$

c. $1 : 5$

d. $2 : 4$

e. $3 : 3$

f. $n : n$

g. $n : 2n$

Can you explain anything you notice?

Independent task

2. Every week Amit, Bernie and Charlie save some pocket money in the ratio 1:4:5.

   a. How much do they each need to save per week for them to have collectively saved £100 after 5 weeks?

   b. If Bernie saves £3 per week. How much will they have saved collectively after 8 weeks?

Independent task

3. The side lengths of a rectangle are in the ratio 3:2.

   a. If the perimeter is 15 cm, find its area.

   b. Another rectangle has the same perimeter, but its side lengths are in the ratio 1:5. What is the area of this rectangle?

Explore

How many different rectangles can you draw with integer values for the length and the width and area $64 \ cm^2$?

What is the ratio of width to length for each rectangle?

Write the ratios in the form $1 : N$ with N being a whole number.

area $= 64 \ cm^2$

area $= 64 \ cm^2$

area $= \ 64 \ cm^2$