



Sharing an Amount in a Given Ratio

The most straightforward example of sharing in a ratio is when you are told the amount that needs sharing and given the relevant ratio.

There are three steps:

1. Add the parts of the ratio together.
2. Divide the total amount by this number.
3. Multiply the original numbers in the ratio by this new value.

For example,

Share £80 in the ratio 1:4.

1. Add the parts of the ratio together.

$$1 + 4 = 5$$

This tells us that we are sharing £80 into 5 parts.

2. Divide £80 by 5.

$$80 \div 5 = £16$$

This tells us that 1 part of our ratio is worth £16.

3. Multiply the numbers in the ratio by £16.

$$1 \times 16 = £16$$

$$4 \times 16 = £64$$

We can check the answers by making sure that they add up to the original amount.

Your Turn

1. Share each amount in the given ratio.

a. £40 in the ratio 1:3

c. £56 in the ratio 2:5

b. £20 in the ratio 2:3

d. 24p in the ratio 5:3



2. Share each amount in the given ratio.

a. 48kg in the ratio 1:3:2

b. £30 in the ratio 4:3:3

c. 99g in the ratio 5:2:4

d. 64cm in the ratio 3:1:4

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3. Alex is 5 years old and Becky is 7. They are going to share £60 in the ratio of their ages. Work out how much each child gets.

4. A box contains 120 sweets. Ali, Billy and Caleb share the sweets in the ratio 4:7:1. Work out how many more sweets Billy receives than Ali.

5. The angles in a quadrilateral are in the ratio 3:3:4:5. Work out the size of the largest angle. Hint: angles in a quadrilateral add up to 360° .

Challenge

Carla and Devon share some money in the ratio 7:3. Given that Devon gets £15, work out how much Carla gets.
