

GCSE Maths: Sharing a quantity in a ratio (Higher): answers

GCSE Maths - Ratio and Proportion - Higher - Lesson 15.3

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/gcse/maths/ch15-ratio-proportion/higher/sharing-a-quantity-in-a-ratio/

Exercise 15C Sharing in a ratio Non-calculator

1 Share each amount in the ratio given.

(a) £20 in the ratio 1 : 4

Answer: £4 and £16

(b) £35 in the ratio 2 : 5

Answer: £10 and £25

(c) 48 kg in the ratio 3 : 1

Answer: 36 kg and 12 kg

(d) 72 sweets in the ratio 5 : 7

Answer: 30 and 42

(e) £90 in the ratio 2 : 3

Answer: £36 and £54

(f) 63 m in the ratio 4 : 5

Answer: 28 m and 35 m

2 Amir and Beth share £84 in the ratio 3 : 4. How much does each person get?

Answer: Amir £36 and Beth £48

3 Ana, Ben and Cat share a prize of £600 in the ratio 1 : 2 : 3. How much does each person get?

Answer: Ana £100, Ben £200 and Cat £300

4 Share each amount in the ratio given.

(a) 60 in the ratio 1 : 2 : 3

Answer: 10, 20 and 30

(b) £120 in the ratio 2 : 3 : 5

Answer: £24, £36 and £60

(c) 90 kg in the ratio 3 : 4 : 8

Answer: 18 kg, 24 kg and 48 kg

5 Share £2.40 in the ratio 1 : 5.

Answer: £0.40 and £2

6 Share £7.50 between Dan and Eve in the ratio 2 : 3.

Answer: Dan £3 and Eve £4.50

- 7** A 20 kg bag of mixture contains sand and cement in the ratio 4 : 1. Work out the mass of sand and the mass of cement.

Answer: sand 16 kg and cement 4 kg

- 8** In a bag, the ratio of red counters to all the counters is 2 : 7. There are 49 counters. How many red counters are there, and how many other counters?

Answer: Red 14, other 35

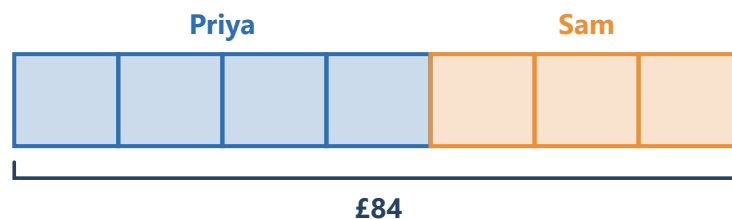
- 9** A school has 840 pupils. The ratio of boys to girls is 7 : 5. How many boys and how many girls are there?

Answer: Boys 490 and Girls 350

- 10** Three partners share a profit of £2400 in the ratio 5 : 4 : 3. How much does each partner receive?

Answer: Partner 1 £1000, Partner 2 £800 and Partner 3 £600

- 11** The bar shows £84 shared between Priya and Sam in the ratio 4 : 3. How much does Priya receive?



Answer: £48

- 12** Competition A: £60 is shared between two people in the ratio 2 : 3. Competition B: £80 is shared between two people in the ratio 1 : 3. Which competition has the bigger top prize, and how much is it?

Answer: B, with £60

- 13** Sophie says: "To share £50 in the ratio 2 : 3, I divide 50 by 2 and 50 by 3." Explain what is wrong, and work out the correct shares.

Answer: £20 and £30

- 14** Two people share £50 in the ratio 3 : 4. Is it possible for both of them to receive a whole number of pounds? Give a reason.

Answer: No

- 15** Mum, Dad and Ella share £240 in the ratio 3 : 2 : 1. Dad then gives half of his share to Ella. Write the ratio of the three amounts now, in the order Mum : Dad : Ella, in its simplest form.

Answer: 3 : 1 : 2