Mathematics

Sharing Ratio

Quick-fire questions...

Share the following amounts

1. Divide £80 in the ratio 2:3 _____
2. Split 120g in the ratio 3:5 _____
3. Divide 150ml in the ratio 1:2 _____
4. Split £480 in the ratio 4:8 _____
5. Share £250 in the ratio 4:6 _____
6. Divide 180m in the ratio 1:3 _____
7. Share £189 in the ratio 2:7 _____

Jonas and Yannis won £560 in an art competition. They shared it in the ratio of 3:4. Jonas paid £15 for a taxi home and gave the driver a £5 tip.

How much of his winnings did he have left?

Abi, Ben and Cat took part in a class captain election with 48 students voting.
The results of the votes were in the ratio 3:1:4, with Cat winning the election.

How many votes did Cat receive?

Kim was creating a pattern. For every 5 triangles, she drew 7 squares.

How many triangles were there if there were 168 shapes in total?

On a school trip, the ratio of adults to students was 3:8.
If there were 145 more students than adults on the trip, **how many people went in total?**

What do I do?

Answer the following questions relating to ratio.

Top Tips!

You'll need to have a basic understanding of ratio before attempting these questions. You'll also need to be able to simplify ratio amounts. Take a look at our other worksheets for these.

When sharing ratio follow these steps:
Divide £80 in the ratio 2:3
1. **Add together the ratio parts** – $2 + 3 = 5$
2. **Divide the original amount by your answer** – $80 \div 5 = 16$ – This is now equal to one part
3. **Multiply each ratio by that one part** $(2 \times 16) : (3 \times 16) = 32 : 48$
4. **If you're correct, your two ratio amounts should equal the original amount given** To check: $32 + 48 = 80$

What skills do I need to improve?

Doing lots of practice questions will help with becoming familiar with question types but what else can you do to improve in this area?

- Any question involving ratio will help with this topic, such as: sharing ratio, word problems involving ratio and finding a value of a ratio.
- Being an expert on your timestables will really help speed things up for you too!
- Brush up on your division facts for 2 – 10. Do you know how to recognise that a number is divisible by 9 within a few seconds?

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Answers

Share the following amounts

1. Divide £80 in the ratio 2:3 – **£32 : £48**
2. Split 120g in the ratio 3:5 – **45g : 75g**
3. Divide 150ml in the ratio 1:2 – **50ml : 100ml**
4. Split £480 in the ratio 4:8 – **£160 : £320**
5. Share £250 in the ratio 4:6 – **£100 : £150**
6. Divide 180m in the ratio 1:3 – **45m : 135m**
7. Share £189 in the ratio 2:7 – **£42 : £147**

Jonas and Yannis won £560 in an art competition. They shared it in the ratio of 3:4. Jonas paid £15 for a taxi home and gave the driver a £5 tip.
How much of his winnings did he have left?
£240 : £320 --> Jonas had £240 but spent £20 in total.
Answer: £220

Abi, Ben and Cat took part in a class captain election with 48 students voting.
The results of the votes were in the ratio 3:1:4, with Cat winning the election.
How many votes did Cat receive?
3 + 1 + 4 = 8 --> 48 ÷ 8 = 6 --> (3 x 6) : (1 x 6) : (4 x 6) --> 18 : 6 : 24
Answer: 24 votes

Kim was creating a pattern. For every 5 triangles, she drew 7 squares.
How many triangles were there if there were 168 shapes in total?
5:7 --> 5 x 7 = 12
12 x 5 = 70
Answer: 70 triangles

On a school trip, the ratio of adults to students was 3:8.
If there were 145 more students than adults on the trip, **how many people went in total?**
8–3 = 5 parts
5 parts = 145
145 ÷ 5 = 1 part
1 part = 29
(3 x 29) : (8 x 29)
87 : 232
87 + 232 = 319
Answer: 319