

Ratio problems

Short workbook

- Q1** Share £56 between Amira and Ben in the ratio 3 : 4. *
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- Q2** A bag contains only red and blue counters. The ratio of red counters to blue counters is 2 : 5. What fraction of the counters are blue? *
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- Q3** The ratio of the number of apples to the number of pears in a box is 3 : 7. There are 18 apples. How many pears are there, and how many pieces of fruit are there altogether? **
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- Q4** A drink is made by mixing concentrate and water in the ratio 2 : 7 by volume. How much concentrate and how much water are needed to make 630 ml of the drink? **
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- Q5** Two ribbons have lengths in the ratio 4 : 9. The longer ribbon is 35 cm longer than the shorter ribbon. Find the length of each ribbon. **
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- Q6** Three positive quantities satisfy $A : B = 3 : 4$ and $B : C = 6 : 5$. Find $A : B : C$ in its simplest form. **
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- Q7** A bag contains red and blue counters in the ratio 3 : 5. Six red counters are removed and ten blue counters are added. The ratio of red to blue counters is now 1 : 3. Find the original number of each colour. ***
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- Q8** Alloy A contains gold and copper in the ratio 2 : 3 by mass. Alloy B contains gold and copper in the ratio 5 : 2. The alloys are mixed to give a gold-to-copper ratio of 3 : 2. Adding 22 g of copper then makes this ratio 1 : 1. Find the mass of each alloy used. ****
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GCSE MATHS

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Answers

- Q1** Amira £24; Ben £32
- Q2** $\frac{5}{7}$
- Q3** 42 pears; 60 pieces of fruit altogether
- Q4** 140 ml concentrate; 490 ml water
- Q5** Shorter ribbon 28 cm; longer ribbon 63 cm
- Q6** 9 : 12 : 10
- Q7** 21 red counters; 35 blue counters
- Q8** 40 g of alloy A; 70 g of alloy *B*