GCSE Exam Questions

Dividing Ratios | Ratio & Proportion

GCSE Exam Questions: Dividing Ratios

1) **(a)** Rajinder and Sara share £90 in the ratio 1:2.

Work out how much each of them get.

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(3)

(b) Sara gives £10 to Rajinder.

Write down the ratio of Ranjinder's money to Sara's money.
Give your ratio in its simplest terms.

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(3)

(6 marks)

2) **(a)** The ratio of students in a school who are right- to left- handed is 8:1.

There are 2223 students in the school.
How many are right-handed?

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(3)

(b) Another student enrols at the school. They are left handed.

Calculate the new ratio of right- to left-handed students in the simplest form.

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(3)

(6 marks)

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1

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3) (a) Triangle *A* has three angles in the ratio $x - 10 : 2x : 2x + 10$.

Calculate the size of each angle.

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(3)

(b) What type of triangle is triangle *A*?

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(1)

(4 marks)

4) (a) Three rucksacks have a combined weight of $57kg$.

Rucksack *C* is $2kg$ heavier than rucksack *A*, which is $1kg$ lighter than rucksack *B*.

What are the weights of each rucksack?

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(4)

(b) Each person wants to carry the same weight of rucksack, but maintain $57kg$ across the three of them.
What should happen to make the ratio of their rucksacks 1 : 1 : 1?

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(1)

(5 marks)

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GCSE Exam Questions: Dividing Ratios Answers

		Question	Answer	Marks
1) (a)		Rajinder and Sara share £90 in the ratio 1 : 2. Work out how much each of them get	**(a)** $90 \div (1 + 2)$ Rajinder = £30 Sara = 2 × 30 = £60	**(1)** **(1)** **(1)**
(b)		Sara gives £10 to Rajinder. Write down the ratio of Ranjinder's money to Sara's money. Give your ratio in its simplest terms.	**(b)** 30 + 10 = 40 **and** 60 - 10 = 50 40 : 50 4 : 5	 **(1)** **(1)** **(1)**
2) (a)		The ratio of students in a school who are right- to left- handed is 8 : 1. There are 2223 students in the school. How many are right-handed?	**(a)** 8 + 1 = 9 $2223 \div 9 = 247$ 247 × 8 = 1976	**(1)** **(1)** **(1)**
(b)		Another student enrols at the school. They are left handed. Calculate the new ratio of right- to left-handed students in the simplest form.	**(b)** 2224 students, 248 left-handed 1976 : 248 247 : 31	**(1)** **(1)** **(1)**
3) (a)		Triangle A has three angles in the ratio x - 10 : 2x : 2x + 10. Calculate the size of each angle.	**(a)** $x - 10 + 2x + 2x + 10 = 180$ $x = 36°$ 26°, 72°, 82°	**(1)** **(1)** **(1)**
(b)		What type of triangle is triangle *A*?	**(b)** Scalene	**(1)**
4) (a)		Three rucksacks have a combined weight of 57kg. Rucksack *C* is 2kg heavier than rucksack *A*, which is 1kg lighter than rucksack *B*. What are the weights of each rucksack?	**(a)** $x : x + 1 : x + 2$ $3x + 3 = 57$ $x = 18$ A = 18 kg, B = 19kg, **and** C = 20kg	**(1)** **(1)** **(1)** **(1)**
(b)		Each person wants to carry the same weight of rucksack, but maintain 57kg across the three of them. What should happen to make the ratio of their rucksacks 1 : 1 : 1?	**(b)** *C* gives *A* 1kg	**(1)**

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