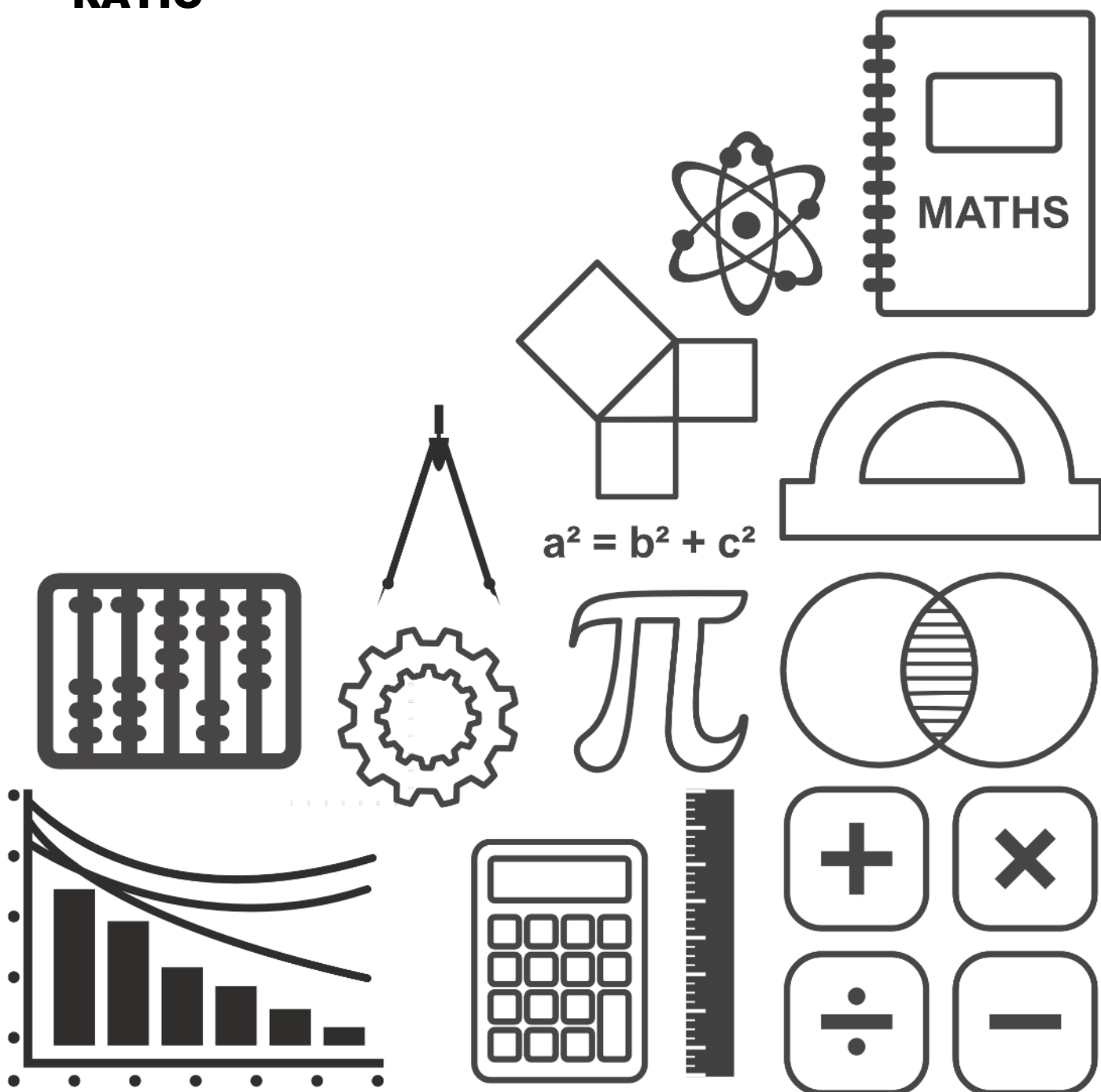


# MATHSDIY

## GCSE TOPIC BOOKLET RATIO



1. Dominic, Rosie and Harry share £200 in the ratio of 4: 5: 7.

Calculate how much each one receives.

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(3)

2. Sophie, Max and Finn share £972 in the ratio of 11: 9: 7.

Calculate how much each one receives.

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(3)

3. George, Ahmed and Sally share a prize of £4000 in the ratio of 4:5:7.

Calculate how much each one receives.

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(3)

4. Abi, Nathaniel and Nick share £3600 in the ratio of 4:5:9.

Calculate how much each one receives.

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(3)

5. A village raised £6000 for charity. The organisers decided to share the money between the hospital, OXFAM and the RSPCA in the ratio 11: 8: 6. How much will each charity receive?

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(3)

6. Mustafa, Ben and Olivia invest £1800, £3700 and £2500 respectively in a business venture which makes them a profit of £1600. They share the profit in proportion to how much they each invested. Calculate how much each of them gets.

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(3)

7. An alloy is made by combining tin and copper in the ratio 3: 5. What weights of tin and copper are there in 240 kg of the alloy?

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(3)

8. A photograph measure 12cm by 9cm. Each side is enlarged in the ratio 3: 2. What are the measurements of the photograph after it has been enlarged?

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(3)

9. A model of a new hotel is made to a scale of 1: 250.

a) The length of the front wall of the model hotel is 30cm long. Calculate the real-life size of this front wall in metres.

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(3)

b) The height of the real-life hotel will be 50m. What is the height, in cm, of the model of the hotel?

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(2)

10. Caitlyn and Tom invest some money and share any profit made in the ratio of 5: 4.

a) How much does Caitlyn get when they make a profit of £270?

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(2)

b) On another occasion, Tom received £136. How much profit were they sharing?

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(2)

11. Some of the ingredients needed to make enough Banoffi pie for 6 servings are listed below:

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|---------------------|
| 175g butter         |
| 2 bananas           |
| 30g plain chocolate |
| 300ml double cream  |

- a) How many bananas would be needed for 18 servings?

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(1)

- b) How much plain chocolate would be needed to make enough pie for 21 servings?

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(2)

12. An alloy is made by using copper and zinc in the ratio 17: 3.

- a) How much zinc is used to make 4 kg of the alloy?

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b) There is only 1.5 kg of zinc available, but plenty of copper. What is the greatest amount of the alloy that can be made?

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(2)

13. A packet contains cake mixture weighing 385g.

The mixture is made up of only flour, sugar and raisins. The weight of the flour is twice the weight of the sugar, and the weight of the sugar is twice the weight of the raisins. Calculate the weight of the flour, sugar and raisins in the packet.

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(4)

14. Two brothers, Will and Oscar, share a sum of money in the ratio 2: 7. Oscar gets £30 more than Will. Calculate how much money the brothers share.

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(4)

15. The radius of a hemisphere and the radius of a cylinder are equal. The hemisphere and cylinder have equal volume.

Calculate the ratio of the height of the cylinder to the radius of the cylinder.

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height of cylinder : radius of cylinder

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16. Ruchi is organising a party at her house, and would like to give her 30 guests a fruit drink on arrival. The recipe for the drink requires lime juice and orange juice in the ratio 1: 5. Ruchi plans to give each of her guests a 250 ml drink. She has plenty of lime juice, but she only has 6 litres of orange juice. Decide whether or not Ruchi has enough orange juice to make 30 fruit drinks. You must show your working.

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(6)