

Working with Ratios

Ratios / Problem Solving with Ratios / Working with Proportion

Easy (4 questions)	/8
Medium (6 questions)	/22
Hard (3 questions)	/11
Total Marks	/41

Scan here to return to the course
or visit [savemyexams.com](https://www.savemyexams.com)



Easy Questions

- 1 A plane has 14 First Class seats, 70 Premium seats and 168 Economy seats.

Find the ratio First Class seats : Premium seats : Economy seats. Give your answer in its simplest form.

..... : :

(2 marks)

- 2 Alex and Chris share sweets in the ratio Alex : Chris = 7 : 3.
Alex receives 20 more sweets than Chris.

Work out the number of sweets Chris receives.

(2 marks)

- 3 Divide \$24 in the ratio 7 : 5.

\$, \$

(2 marks)

- 4 Kristian and Stephanie share some money in the ratio 3 : 2. Kristian receives \$72.
Work out how much Stephanie receives.

\$

(2 marks)

Medium Questions

- 1 One day, the newspaper had 60 pages of news and advertisements.
The ratio number of pages of news : number of pages of advertisements = 5:7.

i) Calculate the number of pages of advertisements.

[2]

ii) Write the number of pages of advertisements as a percentage of the number of pages of news.

..... % [1]

(3 marks)

- 2 Marianne sells photos.
The selling price of each photo is \$6.
The selling price for each photo is made up of two parts, printing cost and profit.
For each photo, the ratio printing cost : profit = 5 : 3.

Calculate the profit she makes on each photo.

\$

(2 marks)

3 The Muller family are on holiday in New Zealand.

The family visit two waterfalls, the Humboldt Falls and the Bridal Veil Falls.

The ratio of the heights Humboldt Falls : Bridal Veil Falls = 5 : 1.

The Humboldt Falls are 220 m higher than the Bridal Veil Falls.

Calculate the height of the Humboldt Falls.

.....m

(2 marks)

4 (a) Adele, Barbara and Collette share \$680 in the ratio 9 : 7 : 4.

Show that Adele receives \$306.

(2 marks)

(b) Calculate the amount that Barbara and Collette each receives.

Barbara \$

Collette \$

(3 marks)

5 (a) James is tiling a room.

Each wall requires 5 white tiles, 13 blue tiles, and 15 green tiles to make a desired pattern.

He already has 23 white tiles, 40 blue tiles, and 55 green tiles.

Does James have enough of each tile to cover all four walls of the room with the desired pattern? If not, what more would he require?

(3 marks)

(b) For another room, James decides to use white and red paint in a ratio of 1:2 to make a paint.

He requires 36 litres of the paint mixture to cover the room.

James must buy all the red paint he needs.

He can buy red paint in:

5-litre tins at £5.50

2-litre tins at £2.50

Which choice is most cost-efficient for James? Give a reason for your answer.

(4 marks)

6 A box contains red small balls, red large balls, blue small balls, and blue large balls.

The ratios of the balls are

red balls:blue balls = 5:6

small balls:large balls = 3:8

Express the total number of red balls as a fraction of the total number of large balls.

(3 marks)

Hard Questions

- 1 Some visitors to a campsite are in the ratio

men : women = 5 : 4 and women : children = 3 : 7.

- i) Calculate the ratio **men : women : children** in its simplest form.

..... : : [2]

- ii) There are 224 children at the campsite.
Calculate the total number of men and women.

[3]

(5 marks)

- 2 One day Dhanu plays with his model railway from 06 50 to 11 15. He then rides his bicycle for 3 hours.

Find the ratio *time playing with model railway : time riding bicycle*.
Give your answer in its simplest form.

..... :
(3 marks)

- 3** Ali and Mo share a sum of money in the ratio Ali : Mo = 9 : 7. Ali receives \$600 more than Mo.

Calculate how much each receives.

Ali \$

Mo \$

(3 marks)