

Name:

Date:

Ratio Fraction Problems 2

GCSE
Edexcel
Mathematics
Grade (9-1)

Mark

Score (%)

$\frac{\quad}{65}$

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Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

Information

- The marks for the questions are shown in brackets

Leave
blank

- 1** The ratio of oranges to lemons is 3:4.
The ratio of lemons to mangoes is 2:5.
What is the ratio of oranges to mangoes?

.....
(Total for question 1 is 2 marks)

- 2** The ratio of chocolates to candies in a box is 3:4.
The ratio of candies to chips is 4:3.
What is the ratio of chocolates to chips?

.....
(Total for question 2 is 2 marks)

- 3 The ratio of dresses to hats in Sana's cupboard is 5:3.
The ratio of dresses to shoes is 2:5.

Find the ratio of shoes to hats.
Give your answer in its simplest form.

.....
(Total for question 3 is 2 marks)

- 4 $a:b = 3:4$
 $b:c = 2:7$

Find the ratio $a:b:c$.
Give your answer in its simplest form.

.....
(Total for question 4 is 2 marks)

Leave blank

- 5 The ratio of shoes to dresses is 3:5.
The ratio of dresses to pants is 5:7.

There are 30 clothing items.
How many pants are there?

.....
(Total for question 5 is 3 marks)

- 6 The ratio of hens to goats in a field is 5:2.
The ratio of goats to cows is 1:4.

There are 12 more cows than goats
How many hens are there in the field?

.....
(Total for question 6 is 3 marks)

7 Anna, Ben and Cathy share £132.

The amount Anna and Cathy get is in the ratio 9:5

The amount Ben and Cathy get is in the ratio 2:1

How much does Anna get?

.....
(Total for question 7 is 3 marks)

8 $a : b = 4 : 7$
 $b : c = 3 : 8$

Find the ratio $a : b : c$.

Give your answer in its simplest form.

.....
(Total for question 8 is 3 marks)

9 There are cherry, blueberry and green apple flavored sweets in a bag.

The ratio of cherry flavored sweets to sweets that are not cherry flavored is 2:3

The ratio of green apple flavored sweets to sweets that are not green apple flavored is 6:19

Work out the ratio of cherry flavored sweets to blueberry flavored sweets to green apple flavored sweets.

Give your answer in its simplest form.

.....
(Total for question 9 is 4 marks)

10 There are red, purple and blue counters in a bag.

The ratio of red counters to counters that are not red is 1:2.

The ratio of blue counters to counters that are not blue is 1:4

Work out the ratio of red counters to purple counters.

Give your answer in its simplest form.

.....
(Total for question 10 is 3 marks)

11 The points P, Q, R and S lie in order on a straight line.

$$PQ: QS = 3: 15 \text{ and } PR: RS = 5: 4$$

Find the ratio $PQ: QR: RS$

Give your answer in its simplest form.

.....
(Total for question 11 is 3 marks)

12 Hannah and Miley share some biscuits in the ratio 11:4.

Hannah gets A biscuits Miley gets B biscuits

Lilly and Lola share the same amount of biscuits as Hannah and Miley.

They share their biscuits in the ratio 7:3.

Lilly gets C biscuits Lola gets D biscuits.

Find the ratio $A: B: C: D$.

Give your answer in its simplest form.

.....
(Total for question 12 is 4 marks)

- 13** P and Q are in the ratio 3:7
R and S are in the ratio 2:3

Given: $P + Q = 3(R + S)$

Find the ratio $P : Q : R : S$

Give your answer in its simplest form.

.....
Total for question 13 is 3 marks)

- 14** Sarah and James share some money in the ratio 1:3.

Sarah gets £ S James gets £ J

Ali and Dean share the same amount of money as Sarah and James.

They share the money in the ratio 5:7.

Ali gets £ A Dean gets £ D

Find $S : J : A : D$

Give your answer in its simplest form.

.....
(Total for question 14 is 4 marks)

15 Jess bought juice, coffee and tea for his colleagues.

The ratio of cups of coffee to tea is 2:1.

The ratio of cups of tea to juice is 5:2.

There are 8 more cups of coffee than juice.

How many cups of tea did Jess buy?

.....
(Total for question 15 is 4 marks)

16 Carly made some cupcakes for a bake sale.

The ratio of chocolate cupcakes to cherry cupcakes was 4:1

The ratio of cherry cupcakes to lemon cupcakes was 2:5

(a) Work out the ratio of chocolate to cherry to lemon cupcakes.

.....
(2)

(b) Work out the smallest possible number of cupcakes that Carly could have made.

.....
(2)

(Total for question 16 is 4 marks)

17 Jess is painting her room.

She mixes gray and white paint in the ratio 7:11 for 2 of her walls.

She mixes yellow and red paint in the ratio 5:1 for the remaining 2 of her walls.

All 4 walls require equal amount of paint.

She used 900 ml more white paint than gray paint.

How much red paint did she use?

.....
(Total for question 17 is 4 marks)

18 The points P, Q, R and S lie in order on a straight line.

$PQ:PS = 1:8$ and $QR:PS = 1:4$

Find $PQ:QR:RS$

Give your answer in its simplest form.

.....
(Total for question 17 is 4 marks)

19 Dean is making brownies using flour, coco powder, water and milk.

He mixes flour and coco powder in the ratio 2:3.

He mixes water and milk in the ratio 1:2

He uses the same mass of dry ingredients as liquids.

He uses 50 more grams of milk than flour.

What is the total mass of the batter?

.....
(Total for question 19 is 4 marks)

20 Alissa tosses a tetrahedral dice with faces labelled I, II, III, and IV.

The ratio of the number of times it landed on II to not II is 1:5.

The ratio of the number of times it landed on I to not I is 1:4.

The ratio of the number of times it landed on III to not III is 1:3.

Find the ratio of the number of times the dice landed on I:II:III:IV.

Give your answer in its simplest form.

.....
(Total for question 20 is 4 marks)