

Ratio (Foundation Level 3 - 5)

Please write clearly in block capitals

Forename:

Surname:

Materials

For this paper you must have:

- mathematical instruments



You *can* use a calculator.

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

Advice

- In all calculations, show clearly how you work out your answer.

1(a) If the ratio of $x:y$ is 6:11, and $x = 27$,
what is the value of y ?

(Level 4)

[1 mark]

32

33

49.5

55

1(b) If 200 grams of one ingredient is used in a recipe, which calls for a ratio of 4:7 with a second ingredient, how much of the second ingredient is needed?

[1 mark]

203 grams

280 grams

350 grams

1400 grams

1(c) In a class of 42 students, the ratio of male : female is 2 : 4.
How many females are there?

[1 mark]

14

28

40

42

2 Consider the following table:

(Level 4)

x	y
12	28
21	49
36	84
51	
	133

2(a) Complete the table for the missing values.

[2 marks]

Answer _____

2(b) Express the ratio $x : y$ in simplest form.

[2 marks]

Answer _____



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3 There are 200 medals bought for a sports celebration. (Level 5)
The ratio of winning medals to participation medals is 1: 4.

3(a) How many of each of the winning and participation medals are there?

[2 marks]

Answer _____

3(b) An additional 40 medals are purchased.

The ratio of winning medals to participation medals remains at 1: 4.

Find the number of winning and participation medals there would be after the 40 medals are added.

[2 marks]

Answer _____



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4 Terry, Alisha and Ella run on a weekly basis. (Level 5)

In total, they average 176 km a week.

If Alisha runs twice as far as Terry and Ella runs one third of Alisha's distance, how far do each of them run?

[3 marks]

Answer _____

5 A construction company needs workers for a job. (Level 5)

The ratio of general labour to management is 8 : 1

The budget for each general labourer is £2,500 and £8,200 for each management employee.

There are 32 general labourers employed.

How much is spent on all the employees for the job?

[3 marks]

Answer _____

Turn over for next question

6 There is £80 in a pot which is shared out amongst 3 people. (Level 5)

Anne gets £20, Mark gets £35 and Ben gets £25.

What ratio of the money does each person receive?

[2 marks]

Answer _____

7 210 cakes are shared out in a ratio of 1:2:3 in to groups a, b and c respectively. (Level 5)

How many cakes does each group receive?

[2 marks]

Answer _____



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Turn over ►

8 £60 pocket money is split between three people. (Level 5)
Sally gets twice the amount of Rob and Malik gets three times more than Rob.

8(a) How much money does each person get?

[2 marks]

Answer _____

8(b) How much does each person get if the original amount is reduced by 50%?

[2 marks]

Answer _____

- 9** There are 24 people working in a kitchen, (Level 5)
 4 men below the age of 18
 4 women below the age of 18,
 8 women above the age of 18
 8 men above the age of 18

- 9(a)** What proportion of the people in the kitchen were male?
 Give your answer as a fraction in its simplest form.

[1 mark]

Answer _____

- 9(b)** Find the ratio of women below the age of 18, compared to the total numbers of workers in the kitchen.
 Give your answer in its simplest form.

[2 marks]

Answer _____

End of questions