

Name:

Date:

# Ratio

## GCSE

Edexcel

Mathematics

Grade (9-1)

Mark

Score (%)

<hr/> <b>60</b>	
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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** Simplify the ratio 16 : 24

You **must** show all of your working.

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

**2** Simplify the ratio 21 : 33

You **must** show all of your working.

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

Leave  
blank

3 Dean and Sam have a pack of 56 balloons.

They divide them so that the ratio of balloons that Dean gets to Sam's is 3 : 4.

How many balloons does Sam get?

..... balloons

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

4 Divide \$180 in the ratio 7 : 8 : 15.

You **must** show all of your working.

\$. : \$. : \$.

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

Leave  
blank

5 A wooden block of length 12 inches is cut into pieces in the ratio 1 : 2.  
What is the length of the **longer** piece?

..... inches

**(Total for question 5 is 2 marks)**

6 Simplify the ratio 525 : 175.  
You **must** show all of your working.

.....  
**(Total for question 6 is 2 marks)**

Leave  
blank

7 Sarah is baking cupcakes and brownies for her friend's birthday.  
The ratio of cupcakes to brownies is 3 : 2  
If there were 33 cupcakes, how many brownies did Sarah bake?

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

8 Divide 30 m in the ratio 2 : 3.  
You **must** show all of your working.

.....  
(Total for question 8 is 2 marks)

Leave  
blank

- 9** Harry has 3 kinds of sweets, red, blue and yellow, in the ratio 3 : 4 : 5.  
If he has 144 sweets in total, how many more yellow sweets does he have than red ones?

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

- 10** Simplify the ratio 1440 : 120.  
You **must** show all of your working.

.....  
**(Total for question 8 is 2 marks)**

Leave  
blank

**11** Jack is baking cookies for his school's annual bake sale.

The ratio of white chocolate chips to dark chocolate chips is 3 : 7.  
There were 20 chocolate chips per cookie.

How many white chocolate chips did each cookie have?

.....chocolate chips

**(Total for question 11 is 2 marks)**

**12** Emma the florist makes bouquets with tulips and roses in the ratio 5 : 7.

If each bouquet has 35 tulips, how many roses does it have?

..... roses

**(Total for question 12 is 3 marks)**

Leave  
blank

**13** The ratio of width to length of a rectangular field is 3 : 4.

Given that the length of the field is 20 m, what is the perimeter of the field?

..... m

**(Total for question 13 is 4 marks)**

**14** A pizza with 16 slices is shared among Hannah and Emily such that Emily gets three times as much pizza as Hannah.

How much does Hannah get?

..... slices

**(Total for question 14 is 2 marks)**

Leave  
blank

**15** Simplify the ratio 27 : 81 : 189

You **must** show all of your working.

.....  
**(Total for question 15 is 3 marks)**

**16** Mark and Lisa share \$150 in the ratio 2 : 3.

Mark shares half of his share with Emily.

Lisa shares one-third of her share with Ali.

How much does each receive?

Mark: .....

Lisa: .....

Emily: .....

Ali: .....

**(Total for question 16 is 4 marks)**

Leave  
blank

**17** The ratio of length to width of a rectangular field is 9 : 4.  
Given that the length of the field is 27m, what is the area of the field?

..... m

**(Total for question 13 is 4 marks)**

**18** Julie and Matt take out some marbles from a bag in the ratio 7 : 11.  
If Matt has 24 more marbles than Julie, How many marbles were there in total?

..... marbles

**(Total for question 14 is 2 marks)**

**19** An inter-school swimming competition is to be held between schools A, B and C. Each school sends 15 students.

School A sends a team of girls and boys in the ratio 2 :

3. School B sends a team of girls and boys in the ratio 1 :

2 School C sends a team of girls only.

(a) Work out the total number of girls in the competition.

..... girls

(3)

(b) What is the ratio of girls to boys in the competition?

.....  
(2)

**(Total for question 19 is 5 marks)**

**20** In a movie theatre, the ratio of children to adults is 2 : 3.

There are 96 children.

(a) How many people are in the theatre?

..... people

(2)

The ratio of cost of child ticket to adult ticket is 1 : 2.

Each child ticket costs \$7.

(b) How much did all the tickets cost?

.....  
(2)

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

Leave  
blank

**21** The ratio of boys to girls in a school is 7 : 13.

If there are 720 more girls than boys, how many students are there in total?

.....

**(Total for question 21 is 3 marks)**