Name: _____

GCSE (1 – 9)

Writing and Simplifying Ratio

Instructions

• Use **black** ink or ball-point pen.
• Answer all questions.
• Answer the questions in the spaces provided
– *there may be more space than you need.*
• Diagrams are **NOT** accurately drawn, unless otherwise indicated.
• You must **show all your working out.**

Information

• The marks for each question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

• Read each question carefully before you start to answer it.
• Keep an eye on the time.
• Try to answer every question.
• Check your answers if you have time at the end

1 Write down the ratio of 350 cm to 25 cm.
Give your answer in its simplest form.

.....

(Total for question 1 is 2 marks)

2 Write down the ratio of 220 kg to 5 kg.
Give your answer in its simplest form.

.....

(Total for question 2 is 2 marks)

3 Alex has the following coins:

Write down the ratio of the value of Alex's 20p coins to the value of Alex's 50p coins.

.....

(Total for question 3 is 2 marks)

4 (a) Write the ratio 32 : 24 in its simplest form

.....

(1)

(b) $\frac{1}{9}$ of people in a class are left handed.

Write the ratio of left handed people to right handed people

.....

(1)

(Total for question 4 is 2 marks)

---

5 (a) Write the ratio 15 : 35 in its simplest form.

.....

(1)

(b) There are red shapes and blue shapes in a box, $\frac{2}{3}$ of the shapes are red.

Write the ratio of red shapes to blue shapes.

.....

(1)

(Total for question 5 is 2 marks)

6 (a) Write the ratio 81 : 27 in its simplest form

.....

(1)

(b) $\frac{3}{8}$ of chocolates in a box are white chocolate, the rest are milk chocolate.

Write the ratio of white chocolates to milk chocolates.

.....

(1)

(Total for question 6 is 2 marks)

---

7 (a) Write the ratio 24 : 72 in its simplest form.

.....

(1)

(b) In February, it rained on $\frac{3}{7}$ of days

Write the ratio of the days it rained to the number of days it did not rain.

.....

(1)

(Total for question 7 is 2 marks)

8 Write the ratio 7.5 : 2.5 in the form n : 1

.....

(Total for question 8 is 1 mark)

9 Write the ratio 12 : 30 in the form 1 : n

.....

(Total for question 9 is 1 mark)

10 There are some cubes in a bag.

$\frac{1}{6}$ of the cubes are red.

The rest of the cubes are blue.

Write the ratio of the number of red cubes to the number of blue cubes.
Give your answer in the form 1 : n

.....

(Total for question 10 is 2 marks)

11 There are only blue counters, red counters and yellow counters in a bag.

There are twice as many blue counters as yellow counters.
There are three times as many red counters as yellow counters.

Write down the ratio of blue counters to red counters to yellow counters.

.....

(Total for question 11 is 2 marks)

---

12 There are only green pens, black pens and red pens in a box.

There are four times as many green pens as black pens.
There are twice as many red pens as green pens.

Write down the ratio of green pens to black pens to red pens.

.....

(Total for question 12 is 2 marks)

13 Charlotte, Jo and Mike played a game.

Charlotte's scored four times as many points as Jo.
Mike's scored half as many points as Charlotte.

Write down the ratio of Charlotte's points to Jo's points to Mike's points

.....

(Total for question 13 is 2 marks)

---

14 There are 120 people in a school canteen.
Half of the people in the canteen are in year 11 students.

The number of year 11 students in the canteen is three times the number of year 10 students.
The rest of the people in the canteen are year 9 students.

the number of year 9 students : the number of year 10 students = n : 1

Work out the value of n.
You must show how you get your answer.

n = ...

(Total for question 14 is 2 marks)

15 In a bag there are blue sweets, red sweets and yellow sweets.

The number of red sweets is three times the number of blue sweets.
The number of yellow sweets is half the number of red sweets.

Write down the ratio of blue sweets to red sweets to yellow sweets.
Give your answer in the form $a : b : c$ where a, b and c are whole numbers

.....

(Total for question 15 is 2 marks)

16 In a bag there are blue sweets, red sweets and yellow sweets.

The number of blue sweets is four times the number of yellow sweets.
The number of red sweets is half the number of yellow sweets.

Find the percentage of sweets in the bag that are yellow.

..... %

(Total for question 16 is 2 marks)