

Name:

Date:

Ratio Fraction Problems 1

GCSE
Edexcel
Mathematics
Grade (9-1)

Mark

Score (%)

$\frac{\quad}{60}$

--

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

1 In grade 3 there are boys and girls. The ratio of boys to girls in grade 3 is 5:7.
What fraction of students in grade 3 is boys?

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

2 In a box there are chocolates and sweets. The ratio of chocolates to candies in a box is 3:4.
What fraction of sweets in the box is candies?

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

- 3 In Sana's cupboard there are dresses and hats. The ratio of dresses to hats in Sana's cupboard is 5:3. What fraction of the things in Sana's cupboard is hats?

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

- 4 In Jane's pouch there are pens, pencils and erasers. The ratio of pens to pencils to erasers in Jane's pouch is 2:3:1. What fraction of the stationery in Jane's pouch is pencils?

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

5 Anna's cupboard has shoes, dresses and hats.
The ratio of shoes to dresses to hats in Anna's cupboard is 1:1:2.
What fraction of the things in Anna's cupboard is dresses?

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

6 In a field there are hens and goats. The ratio of hens to goats to cows in a field is 5:2:3.
What fraction of the animals is goats?

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

7 Ben's bag contains shirts and pants only.

$\frac{1}{3}$ of the clothes in Ben's bags is pants.

What is the ratio of pants to shirts in Ben's bag?

.....
(Total for question 7 is 2 marks)

8 Ali bought strawberries and oranges.

Strawberries form $\frac{5}{8}$ of the fruits.

What is the ratio of oranges to strawberries?

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

9 Max bought lemons and oranges.
Lemons form $\frac{3}{13}$ of the fruits.
What is the ratio of oranges to lemons?

.....
(Total for question 9 is 2 marks)

10 There are red and blue counters in a bag.
20% of the counters are blue.
What is the ratio of red counters to blue counters?

.....
(Total for question 10 is 2 marks)

11 A box contains white and black marbles.
30% of the marbles are black.

What is the ratio of white marbles to black marbles?

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

12 Students from year 3 and year 4 are going to a field trip

The ratio of girls to boys going to a field trip is 12:13.

The ratio of girls from year 3 to year 4 is 1:2.

What fraction of students is girls from year 4?

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

13 In a park there are adults children and women.

The ratio of adults to children in a park is 1:2.

The ratio of adult men to adult women in 3:4.

What fraction of the total number of people in the park is adult men?

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

14 There are fruits and vegetables in a grocery bag.

The ratios of fruits to vegetables is 3:2.

Among the fruits, the ratio of bananas to apples is 3:4.

What fraction of the fruits and vegetables is apples?

.....
(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 to juice is 2:4:1.

Of the cups of coffee, the ratio of latte to cappuccino is 3:1.

What percentage of the total beverages bought is cappuccino?

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

16 There are fruits and vegetables in a basket.

The ratio of vegetables to fruits is 4:5

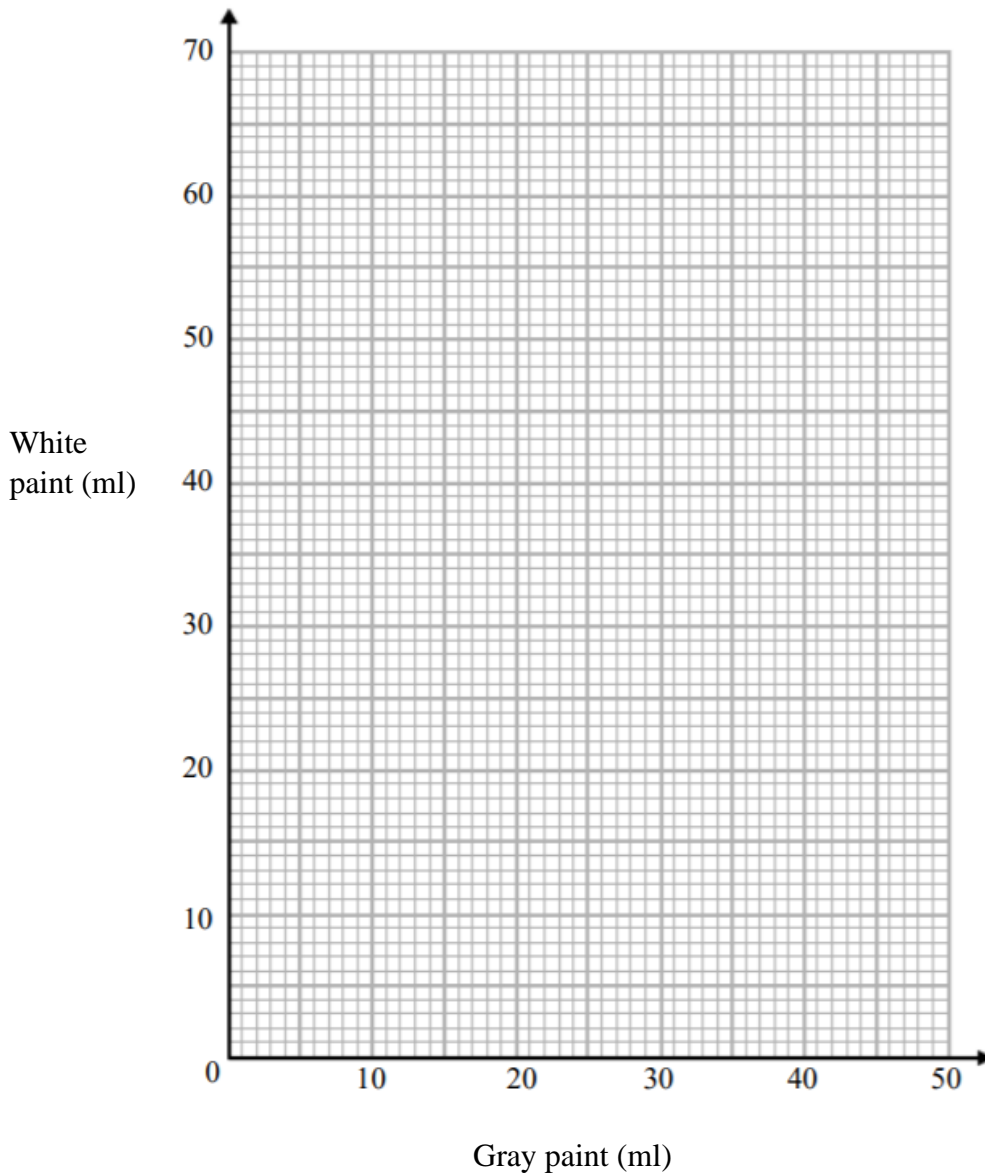
Of the vegetables, the ratio of potatoes to capsicums to carrots is 2:1:5.

What fraction of the fruits and vegetables in the basket is carrots?

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

17 Jess is painting her room.
She mixes gray and white pain in the ratio 7:12.

(a) Use the information above to draw a graph showing the relationship between gray and white paint used.



(4)

(b) Use your graph to work out the volume of white paint used when Jess uses 25 ml of gray paint.

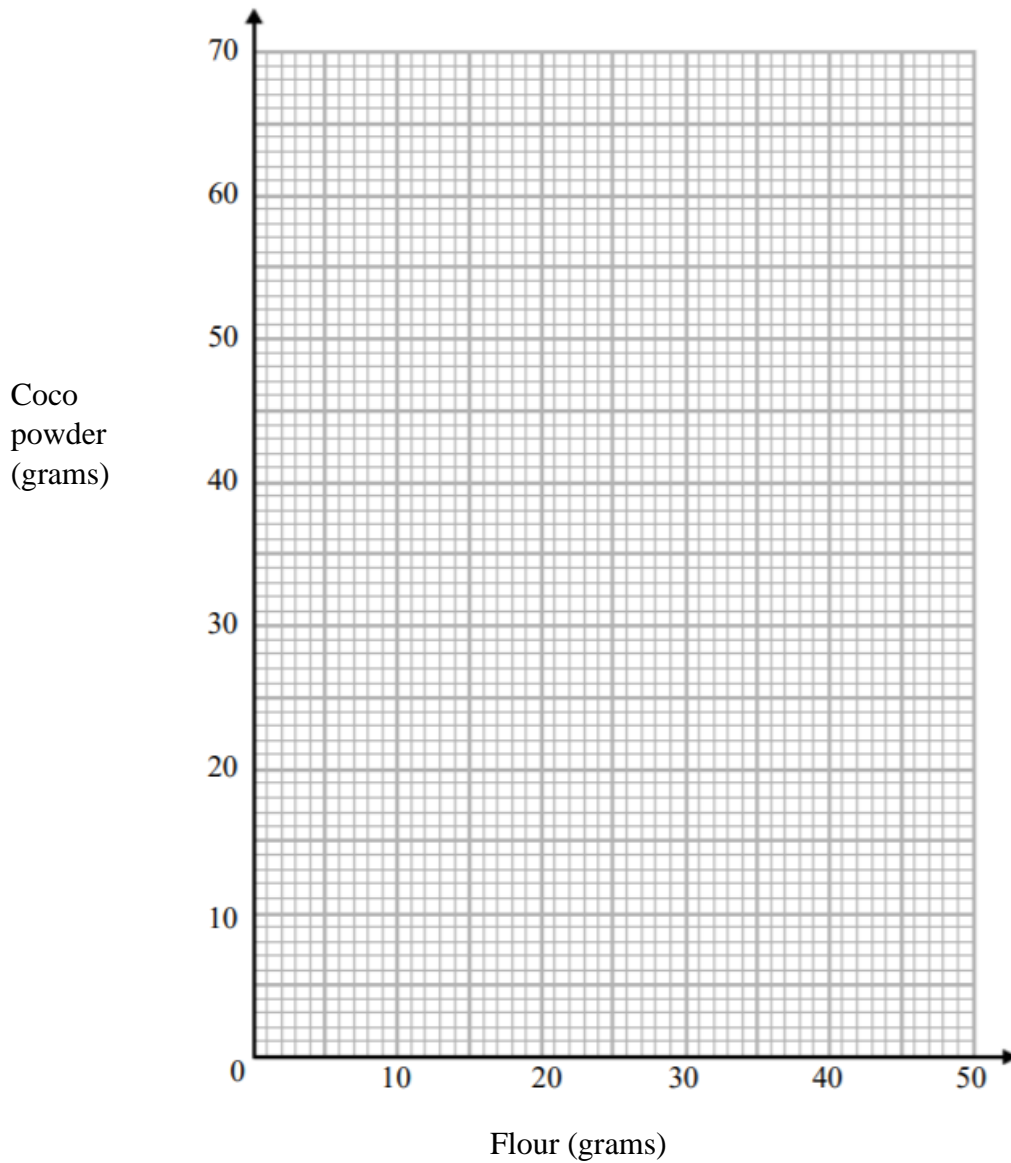
.....
(2)

(Total for question 17 is 6 marks)

18 Dean is making brownies.

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

(a) Use the information above to draw a graph showing the relationship between the flour and coco powder used.



(4)

(b) Using the graph, work out the mass of flour needed when he uses 15 grams of coco powder.

.....
(2)

(Total for question 18 is 6 marks)

19 The ratio of boys to girls in Year 7 is 2:5.
40% of the girls like football.

What fraction of the total number of students in Year 7 is girls who like football?

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

20 The ratio of blue to red to yellow counters in a bag is 3:5:7.
Rizwan removes 20% of the red counters.

What fraction of the total counters did Rizwan remove from the bag?

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