Name: SOLUTIONS

GCSE (1 - 9)

Proportion Recipes

Buy me a coffee

Solutions by
Kenneth Stafford
MATHS TUTOR
ken@kennethstafford.co.uk

These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2017, Paper 1F, Q19
2	Edexcel, GCSE, Summer 2018, Paper 2F, Q17
3	Edexcel, GCSE, Autumn 2018, Paper 1F, Q15
4	Edexcel, GCSE, Autumn 2018, Paper 2F, Q17
5	Edexcel, GCSE, Summer 2019, Paper 1F, Q23
6	Edexcel, GCSE, Autumn 2019, Paper 2F, Q19
7	Edexcel, GCSE, Autumn 2020, Paper 2F, Q17
8	Edexcel, GCSE, Summer 2023, Paper 1F, Q16
9	Edexcel, GCSE, November 2022, Paper 2F, Q20
10	Edexcel, GCSE, Summer 2022, Paper 1F, Q18

1

Here is a list of ingredients for making 16 flapjacks.

8 flapjacks
60g
70g
125g
1

Ingredients for 16 flapjacks

120 g butter
140 g brown sugar
250 g oats
2 tablespoons syrup

Jenny wants to make 24 flapjacks.

Work out how much of each of the ingredients she needs.

$24 \div 8 = 3$

60×3 butter 180 g

70×3 brown sugar 210 g

125×3 oats 375 g

1×3 syrup 3 tablespoons

(Total for Question 19 is 3 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q19]

2

Here is the list of ingredients for making 30 biscuits.

Ingredients for 30 biscuits
225 g butter
110 g caster sugar
275 g plain flour
75 g chocolate chips

Lucas has the following ingredients.

900 g butter
1000 g caster sugar
1000 g plain flour
225 g chocolate chips

What is the greatest number of biscuits Lucas can make?
You must show your working.

$900 \div 225 = 4$

$1000 \div 110 = 9.0\dot{9}$

$1000 \div 275 = 3.6\dot{3}$

$225 \div 75 = 3$

$3 \times 30 = 90$

(Total for Question 17 is 3 marks)

[Edexcel, GCSE, Summer 2018, Paper 2F, Q17]

3

Shahid is going to use these instructions to make a fizzy drink.

> Mix 5 parts of orange juice
> with 2 parts of lemonade

Shahid thinks that he has 300 m*l* of orange juice and 200 m*l* of lemonade.

(a) If Shahid is correct, what is the greatest amount of fizzy drink he can make?

300 ÷ 5 = 60ml

60ml x 2 = 120ml lemonade

300 + 120 = 420

..... m*l*

(3)

Shahid has 300 m*l* of orange juice but he only has 160 m*l* of lemonade.

(b) Does this affect the greatest amount of fizzy drink he can make?
Give a reason for your answer.

No change. He can only use 120ml of lemonade anyway.

(1)

(Total for Question 15 is 4 marks)

[Edexcel, GCSE, Autumn 2018, Paper 1F, Q15]

4

Adrian is going to make concrete.
He is going to use

180 kg of cement
375 kg of sand
1080 kg of stone

Cement, sand and stone are sold in bags.

1 bag cement	1 bag sand	1 bag stone
25 kg	22.5 kg	50 kg

Adrian already has

10 bags of cement
20 bags of sand
20 bags of stone

Work out what bags he needs to buy to make the concrete.

Cement = 10 x 25 = 250kg

Sand = 20 x 22.5 = 450kg

Stone = 20 x 50 = 1000kg

1080 − 1000 = 80kg needed

2 bags of stone needed

(Total for Question 17 is 3 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2F, Q17]

5

Deon needs 50 g of sugar to make 15 biscuits.

She also needs

three times as much flour as sugar
two times as much butter as sugar

Deon is going to make 60 biscuits.

60 ÷ 15 = 4

(a) Work out the amount of flour she needs.

4 x 50g = 200g sugar

x 3 = 600g flour

600 g

(3)

Deon has to buy all the butter she needs to make 60 biscuits.
She buys the butter in 250 g packs.

(b) How many packs of butter does Deon need to buy?

200g x 2 = 400g butter

1 pack = 250g

2 packs = 500g

2 packs

(2)

(Total for Question 23 is 5 marks)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q23]

6

Here are the ingredients needed to make 16 biscuits.

Biscuits

Ingredients to make **16** biscuits

175 g of butter
75 g of sugar
250 g of flour

Anna has

500 g of butter
300 g of sugar
625 g of flour

Work out the greatest number of biscuits Anna can make.

Butter = 500 ÷ 175 = 2.86

Sugar = 300 ÷ 75 = 4

Flour = 625 ÷ 250 = 2.5

2.5 x 16 = 40 biscuits

(Total for Question 19 is 3 marks)

[Edexcel, GCSE, Autumn 2019, Paper 2F, Q19]

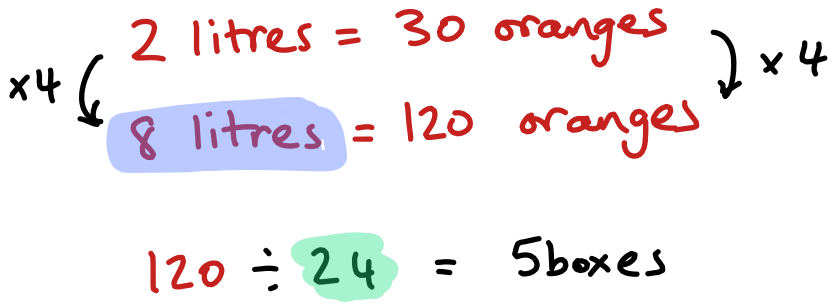
7

Scott wants to make orange juice.
He is going to buy boxes of oranges.

There are 24 oranges in each box of oranges.
30 oranges make 2 litres of orange juice.

Scott needs to buy enough oranges to make 8 litres of orange juice.

(a) Work out the number of boxes of oranges that Scott needs to buy.
You must show all your working.

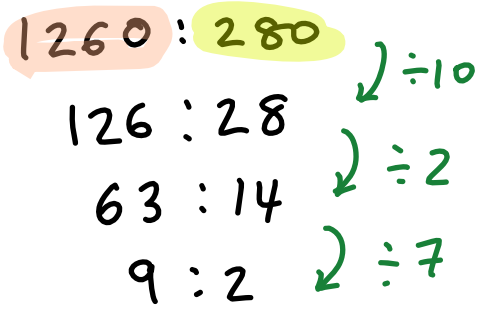


5 boxes

(3)

Scott also buys
1260 apples
280 bananas

(b) Write down the ratio of the number of apples that Scott buys to the number of bananas that he buys.
Give your ratio in its simplest form.



9:2

(2)

(Total for Question 17 is 5 marks)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q17]

8

Here is the list of ingredients for making 20 biscuits.

Ingredients for 20 biscuits
150 g butter 100 g sugar 250 g flour

Harry wants to make 60 biscuits.

How much flour does Harry need?

x3 ↓ 20 biscuits = 250g flour ↓x3

60 biscuits = 750g flour

750 g

(Total for Question 16 is 2 marks)

[Edexcel, GCSE, Summer 2023, Paper 1F, Q16]

9

Here is a list of ingredients for making 10 scones.

5 scones
40g
175g
15g
1 egg

Ingredients for 10 scones
80 g butter
350 g self-raising flour
30 g sugar
2 eggs

25 scones
200g
875g
75g
5 eggs

Martin has

100 g butter
1 kg self-raising flour
50 g sugar
4 eggs

Martin wants to make 25 scones.
He has not got enough of some of the ingredients.

Work out how much more of each of these ingredients he needs.

1 egg
100g butter

(Total for Question 20 is 4 marks)

[Edexcel, GCSE, November 2022, Paper 2F, Q20]

10

Here is a list of ingredients for making 10 scones.

Ingredients for 10 scones

75 g	butter
350 g	self-raising flour
40 g	sugar
150 ml	milk
2	eggs

Mia wants to make 25 scones.
Work out how much sugar she needs.

÷2 ↓ 10 scones = 40g ↓ ÷2
×5 ↓ 5 scones = 20g ↓ ×5
25 scones = 100g

100 ..... g

(Total for Question 18 is 2 marks)

[Edexcel, GCSE, Summer 2022, Paper 1F, Q18]