Name:

Date:

Proportion

GCSE
Edexcel
Mathematics
Grade (9-1)

Mark

$\dfrac{}{49}$

Score (%)

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 If 5 housemates buy 1.5 litres of milk per day, how much milk do 3 of them receive per day?

.... litres

(Total for question 1 is 2 marks)

2 Sana found a recipe on the internet:

Scones
Serves 4
Butter: 30g
Flour: 130 g
Baking powder: 1 tsp
Buttermilk: 90 ml

How much of each ingredient does she need to make scones for 16 people?

Butter:.................................g

Flour:.................................g

Baking powder:...............................tsp

Buttermilk:.................................ml

(Total for question 2 is 4 marks)

3 Mark has a recipe for 60 biscuits.

Here is a list of ingredients for 60 biscuits.

Self-rising flour: 460g
Butter: 300g
Caster sugar: 200g
Eggs: 4

Mark wants to make 75 biscuits.

(a) Complete his new list of ingredients for 75 biscuits.

Self-rising flour: …………………g

Butter: …………………g

Caster sugar: …………………g

Eggs: …………………

(4)

Jen has only 2 kilogram of self-rising flour. She has plenty of the other ingredients.

(b) Work out the maximum number of biscuits that Gill could bake.

.... biscuits

(3)

(Total for question 3 is 7 marks)

4 A scavenger hunt is held at Anne's school.

36 people registered for the event.
Anne's team has 4 members.
There are 108 clues in total, and each participant is to collect the same number of clues.

How many clues did Anne's team collect?

....

(Total for question 4 is 3 marks)

5 3000 ml of milk is needed to make 9 milkshakes.

Marian wants to make 20 of these milkshakes.
She has 6250 ml of milk

Does Marian have enough milk to make 20 milkshakes?
You must show all of your working.

....

(Total for question 5 is 3 marks)

6 The following ingredients are needed to make 12 cupcakes:

Cupcakes

**Makes 12 cupcakes 50 g
of sugar
200 g of butter
200 g of flour
10 ml of milk**

Emily makes some cupcakes.
She uses 35 ml of milk.

(a)   How many cupcakes does Emily make?

....

(1)

Matt has:

500 g of sugar
1000 g of butter
1000 g of flour
500 ml of milk

(b) Work out the greatest number of cupcakes Matt can make.

....

(2)

(Total for question 6 is 3 marks)

7 108 identical books have a mass of 30 kg. Find:

(a) The mass of 150 such books

....

(1)

(b) The number of such books that have a mass of 20 kg

....

(1)

(Total for question 7 is 2 marks)

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

He bakes a batch of 130 cookies using 2450 g of flour.
His cookies are sold out and he needs to bake 50 more cookies.

How much flour does he need?

.... g

(Total for question 8 is 2 marks)

9 Find the cost of

(a) 10 kg of tea leaves when 3 kg of tea leaves cost $18

....
(1)

(b) a kg of sugar when b kg of sugar costs $$c$

....
(1)

(Total for question 9 is 2 marks)

10 John is making concrete using cement, sand and gravel in the ratio 1 : 2 : 4

James has: 37 kg cement 124 kg sand 225 kg gravel

What is the maximum amount of concrete that John can make?

.... kg
(Total for question 10 is 4 marks)

11 Markian is making strawberry shortcakes

She has:

2kg of flour
1kg of butter
340g of icing sugar
200g of strawberries

Here is the list of ingredients for making 20 shortcakes:

> **Strawberry
> Shortcakes**
>
> 100 g of flour 120g
> butter
> 80g icing sugar 25
> of strawberries

Markian wants to make as much shortcakes as he can.
Work out how many shortcakes Markian can make.

.... shortcakes

(Total for question 11 is 4 marks)

12 If 50 g of sweets cost $2.10, find the cost of 380 g of sweets.

Giving your answer correct to the nearest dollar.

$.................................

(Total for question 12 is 2 marks)

13 Hannah is making ice cream.

She uses this recipe:

> **Ice cream**
>
> **Serves 5 300**
> **ml double cream 320 ml**
> **milk**
> **120 g caster sugar**
> **5 vanilla pods**

Hannah is making ice cream for her 13 friends.
How much of each ingredient does Hannah need?

Double cream: ....ml

Milk: ....ml

Caster Sugar: ....g

Vanilla Pods: ....

(Total for question 13 is 4 marks)

14 Darcy is making brownies.

A recipe uses 40g of chocolate and 160g of flour to make 30 brownies.

How flour should Darcy use to make 24 brownies?

.... g

(Total for question 14 is 2 marks)

15 The table shows the carbohydrate content in a pack of chips

	Per 100g	**Per pack**
Carbohydrates	53 g	27 g

Work out the mass of chips in each pack (correct to nearest 10 grams).

.... g

(Total for question 15 is 2 marks)

16 Jim is making Spaghetti Bologna.

He uses the following recipe to make the sauce:

Bolognese Sauce

Chicken stock 100ml
Chopped tomatoes 600g
Mushrooms 40g
Minced chicken 450g

Jim only has 350g of chopped tomatoes.

How much of other ingredients should he use?

Chicken stock: .... ml

Mushrooms: ....g

Minced Chicken: ....g

(Total for question 16 is 3 marks)