Recipes – (Proportion and Ratio) www.m4ths.com

(1) Fred is making some cakes.
The ingredients needed to make 4 cakes are shown below.

4 Cakes	
Ingredient	Quantity
Sugar	150g
Butter	100g
Flour	200g
Eggs	2

(a) Find out how much of each of the ingredients he needs to make 8 cakes.
(b) Find out how much of each of the ingredients he needs to make 2 cakes.

(2) Freda is making some different cakes.
The ingredients needed to make 8 cakes are shown below.

8 Cakes	
Ingredient	Quantity
Sugar	200g
Butter	160g
Flour	216g
Eggs	4

(a) Find out how much of each of the ingredients she needs to make 6 cakes.
(b) Find out how much of each of the ingredients she needs to make 13 cakes.

(3) To make 5 cakes Trev needs 108g of sugar, 157g of flour, 98g of butter and two and a half eggs. Find out how much of each ingredient he will need to make (a) 3 cakes and (b) a dozen cakes,

(4) Brenda has a recipe for making cakes. She knows each cake requires 25g of sugar, 30g of flour, 20g of butter and half an egg. Given that she has 150g of sugar, 400g of flour, 180g of butter and 6 eggs at home, find the maximum number of cakes she can make.

(5) Sally is baking cookies. The cookie dough required for 8 cookies weighs 400g and consists of flour, sugar and butter in the ratio 4:3:1.
(a) Find out how much of each ingredient is used.
(b) Find out how much of each ingredient she would need for 6 cookies.

(6) Abdul is making some cookies. The flour to sugar to butter ratio is 3:2:1
Abdul knows 162g of sugar will make 10 cookies.
(a) How much flour and butter will he need to make 10 cookies?
(b) Find out how much of each ingredient he needs for 7 cookies.

(7) Kelly is making some cookies. The flour to sugar to butter ratio is 4:3:1
Kelly knows that 1kg of cookie dough will make 15 cookies.
(a) Find out how much of each ingredient she will need to make 15 cookies.
(b) Find out how much of each ingredient she will need to make 8 cookies.
Kelly now realises that if she adds 250g of chocolate to the 1kg mix she can make chocolate chip cookies.
(c) Find the ratio of flour to sugar to butter to chocolate after she has added the chocolate. Give your answer in its simplest form.

(8) Peter is making some bread.
He needs bread mix and flour in the ratio 2:1.
The bread mix will make 4 small buns.
(a) Given that he uses 300g of bread mix, find out how much flour he needs.
(b) Find out how much of each ingredient he needs for (i) 6 buns (ii) 5 buns.
Peter decides to follow the same recipe on another day.
He has 0.7kg of bread mix and 0.27kg of flour in his cupboard at home.
(c) Find the maximum number of buns he can make that day.

(9) Fred is following a recipe for cakes.
The ratio of flour to sugar to butter is 4:3:1.
Fred is making 6 cakes. For the 6 cakes he needs 120g of flour.
Given that the cakes lose 10% of their weight whilst being cooked, find the weight of each cake after they have bee cooked.

(10) Sophie is making some cakes. She needs $2p$ grams of flour, p grams of sugar and $p-10$ grams of butter to make 12 cakes.
Given that the cake mixture for 12 cakes weighs 590g, find out how much of each ingredient she needs to make 5 cakes.